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SEARCH REQUEST FORM

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Requester's Full Name: HOA VAN LE Examiner #: 60626 Date: 03/13/03
Art Unit: 1752 Phone Number 308-2295 Serial Number: 10/051,667
Mail Box and Bldg/Room Location: CP3-9310 Results Format Preferred (circle): PAPER DISK E-MAIL

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

① please search for compounds of the general formulas I and II

② compounds in "①" above for use in a photographic art.

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Searcher Prep & Review Time: 20

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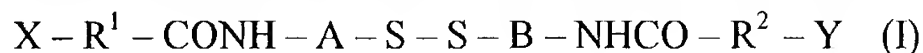
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Claims:

1. A photographic developer composition for use in the development of a black and white silver halide photographic element said composition comprising at least one developing agent and, in an amount sufficient to inhibit sludge deposition, one or more compounds selected from compounds having the formula



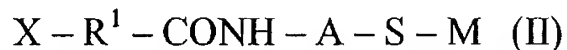
wherein

A and B are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

R^1 and R^2 are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

X and Y are each independently a solubilising group;

and compounds having the formula



wherein A, R^1 and X are as defined above, and

M is either a hydrogen atom or a cationic species if the sulfur atom is in its ionised form.

2. A composition according to claim 1 wherein A and B are selected from a substituted or unsubstituted alkylene group having from 1 to 12 carbon atoms, a cycloalkylene group having from 5 to 8 ring carbon atoms, an aromatic group having from 5 to 10 ring carbon atoms, a heterocyclic group having from 5 to 10 ring atoms, said ring atoms being selected from selected from C, N, S, and O.

3. A composition according to claim 1 wherein A and B are phenylene groups.

4. A composition according to claim 1 wherein R^1 and R^2 are selected from a substituted or unsubstituted alkylene group having from 1 to 12 carbon atoms, a cycloalkylene group having from 5 to 8 ring carbon atoms, an aromatic group having from 5 to 10 ring carbon atoms, a heterocyclic group having from 5 to 10 ring atoms, said ring atoms being selected from selected from C, N, S, and O.

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5. A composition according to claim 1 wherein R^1 and R^2 represent $-(CH_2)_3-$.
6. A composition according to claim 1 wherein the X and Y groups are selected from quaternary ammonium groups and carboxylic, sulfonic, sulfinic and phosphonic groups in acid or salt form.
7. A composition according to claim 1 wherein A and B each represent paraphenylene, R^1 and R^2 each represent $-(CH_2)_3-$ and, X and Y each represent $-COOM$ wherein M is either a hydrogen atom or a cationic species if the carboxyl group is in its ionised form.
8. A composition according to claim 1 wherein compound (I) and/or (II) is present in the developer composition in an amount sufficient to provide a concentration of from 7×10^{-6} to 7×10^{-3} mol/l of working strength developing solution.
9. A composition according to claim 1 further comprising a compound having the formula
- $$Q-S-H \quad (III)$$
- wherein Q represents a substituted or unsubstituted heterocyclic group, the silver salt of said compound being water insoluble
10. A composition according to claim 9 wherein the heterocyclic group has from 5 to 10 ring atoms selected from C, N, S, and O.
11. A composition according to claim 9 wherein the heterocyclic group is benzothiazole group.
12. A composition according to claim 9 wherein the compound of formula (III) is present in the developer composition in an amount sufficient to provide a

concentration of from 2×10^{-5} to 5×10^{-3} mol/l of working strength developing solution.

13. A composition according to claim 1 further comprising a thiol promoting compound selected from sugar derivatives, mercaptocarboxylic acids and compounds selected from those having formula (III) above whose silver salts may be water insoluble or water soluble.

14. A composition according to claim 13 wherein the compound is selected from ascorbates, isoascorbates, erythorbates, piperidine hexose reductone, mercaptosuccinic acid, cysteine and 5-mercaptopentotriazole.

15. A composition according to claim 13 wherein the sugar derivative is present in the developer composition in an amount sufficient to provide a concentration of from 2×10^{-4} to 7×10^{-2} mol/l of working strength developing solution.

16. A composition according to claim 13 wherein the mercaptocarboxylic acid or compound selected from those having formula (III) is present in the developer composition in an amount sufficient to provide a concentration of from 2×10^{-5} to 2×10^{-2} mol/l of working strength developing solution.

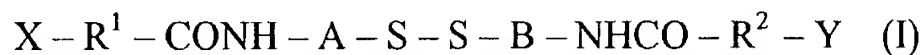
17. A composition according to claim 1 wherein the developing agent is selected from dihydroxybenzene and ascorbic acid developing agents.

18. A composition according to claim 17 further comprising an auxiliary super-additive developing agent.

19. A composition according to claim 1 comprising a sulfite preservative.

20. A method of forming a photographic image in a black and white silver halide photographic element which comprises imagewise exposing the

photographic element and developing the exposed element with a developer solution which is or is produced from a composition comprising at least one developing agent and, in an amount sufficient to inhibit sludge deposition, one or more compounds selected from compounds having the formula



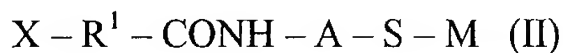
wherein

A and B are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

R^1 and R^2 are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

X and Y are each independently a solubilising group;

and compounds having the formula

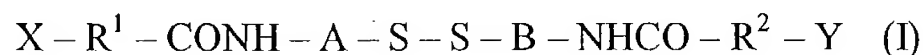


wherein A, R^1 and X are as defined above, and

M is either a hydrogen atom or a cationic species if the sulfur atom is in its ionised form.

21. A method as claimed in claim 20 wherein one or more of the compounds (I) and (II) defined above are added to the developer solution from the photographic element during development.

22. A black and white silver halide photographic element comprising a support having thereon at least one light-sensitive silver halide emulsion layer said element comprising, in an amount sufficient to inhibit sludge deposition during development, one or more compounds selected from compounds having the formula

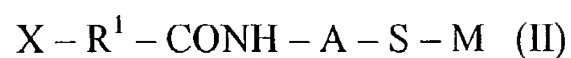


wherein

A and B are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

R^1 and R^2 are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

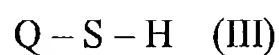
X and Y are each independently a solubilising group;
and compounds having the formula



wherein A, R¹ and X are as defined above, and

M is either a hydrogen atom or a cationic species if the sulfur atom is in its ionised form.

23. A photographic element as claimed in claim 22 further comprising one or more compounds selected from a compound having the formula



wherein Q represents a substituted or unsubstituted heterocyclic group, the silver salt of said compound being water insoluble and a thiol promoting compound selected from sugar derivatives, mercaptocarboxylic acids and compounds selected from those having formula (III) above whose silver salts may be water insoluble or water soluble.

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nucleator and an amino compound which functions as an incorporated booster, utilizing the improved black-and-white developing composition of this invention.

U.S. Pat. No. 4,254,215 describes a process for the prevention of darkening and the formation of a sediment in photographic developer solutions by adding a combination of a mercapto compound and a Bunte salt to the developer solution. The mercapto compound may be a thiol of the formula HS-D-(W)_n where D is a substituted or unsubstituted aliphatic, araliphatic, cycloaliphatic, aromatic or heterocyclic radical and W may be a group of the type $-\text{CONH}_2$.

Problem to be solved by the Invention

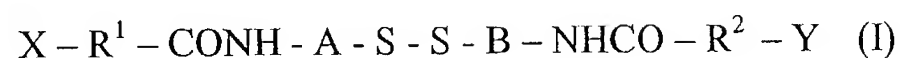
It is an aim of the invention to provide an alternative developer composition in which silver sludge formation is reduced.

It is an aim of the invention to provide a developer composition containing a silver antisludging agent in which the rate of loss of antisludging activity on dilution is decreased.

It is an aim of the invention to provide a developer composition containing a silver antisludging agent in which the loss of antisludging activity on prolonged keeping is diminished.

Summary of the Invention

In one aspect the invention provides a photographic developer composition for use in the development of a black and white silver halide photographic element said composition comprising at least one developing agent and, in an amount sufficient to inhibit sludge deposition, one or more compounds selected from compounds having the formula



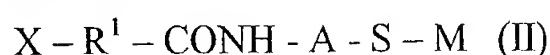
wherein

A and B are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

R^1 and R^2 are each independently a substituted or unsubstituted aliphatic, alicyclic, aromatic or heterocyclic group;

X and Y are each independently a solubilising group;

and compounds having the formula



wherein A, R¹ and X are as defined above, and
M is either a hydrogen atom or a cationic species if the sulfur atom is in its ionised form.

In another aspect, the invention provides a method of forming a
5 photographic image in a black and white silver halide photographic element which comprises imagewise exposing the photographic element and developing the exposed element with a developing composition comprising at least one developing agent and, in an amount sufficient to inhibit sludge deposition, a compound having the formula (I) and/or (II) as defined above.

10 In another aspect, the invention provides a black and white silver halide photographic element comprising a support having thereon at least one light-sensitive silver halide emulsion layer said element comprising, in an amount sufficient to inhibit sludge deposition during development, a compound having the formula (I) and/or (II) as defined above.

15 **Advantageous Effect of the Invention**

Use of the developer composition of the invention reduces sludge formation.

The antisludging activity of the developer composition diminishes only gradually on dilution.

20 The antisludging activity loss of the developer composition on prolonged keeping is diminished.

Brief Description of the Drawings

Figures 1 to 3 show the concentration of various components of the developer compositions used in Example 2.

25 **Detailed Description of the Invention**

The developing compositions of this invention are useful for forming black-and-white silver images by development of light-sensitive silver halide photographic elements of many different types, including, for example, microfilms, aerial films and X-ray films. They are especially useful in the field of graphic arts for forming
30 very high contrast silver images. In the graphic arts field, they can be used with a wide variety of graphic arts films.

Regarding the compounds (I) and (II), A and B may be selected from a substituted or unsubstituted alkylene group having from 1 to 12, preferably from 1 to 6 carbon atoms, a cycloalkylene group having from 5 to 8, preferably from 5 to 6 ring carbon atoms, an aromatic group having from 5 to 10, preferably from 5 to 6 ring carbon atoms, (e.g. a fused aromatic group having from 9 to 10 carbon atoms),
5 a heterocyclic group having from 5 to 10, preferably from 5 to 6 ring atoms (e.g. a fused heterocyclic group having from 9 to 10 ring atoms), said ring atoms being selected from selected from C, N, S, and O.

Particularly preferred A and B groups include phenylene.

10 Examples of substituents for the A and B groups include alkyl groups (e.g. methyl, ethyl, hexyl), haloalkyl groups (e.g. trifluoromethyl, trichloromethyl, tribromomethyl), alkoxy groups (e.g. methoxy, ethoxy, octyloxy), aryl groups (e.g. phenyl, naphthyl, tolyl), hydroxy groups, halogen atoms, aryloxy groups (e.g. phenyloxy, alkylthio groups (e.g. methylthio, butylthio), arylthio groups (e.g.
15 phenylthio), acyl groups (e.g. acetyl, propionyl, butyryl, valeryl), sulfonyl groups (e.g. methylsulfonyl, phenylsulfonyl), acylamino groups, sulfonylamino groups, acyloxy groups (e.g. acetoxy, benzoxy), cyano groups, amino groups, groups represented by X and Y as defined above and groups represented by $X - R^1 - CONH -$ and $Y - R^2 - CONH -$ as defined above.

20 R^1 and R^2 may be selected from a substituted or unsubstituted alkylene group having from 1 to 12, preferably from 1 to 6 carbon atoms, a cycloalkylene group having from 5 to 8, preferably from 5 to 6 ring carbon atoms, an aromatic group having from 5 to 10, preferably from 5 to 6 ring carbon atoms, (e.g. a fused aromatic group having from 9 to 10 carbon atoms), a heterocyclic group having
25 from 5 to 10, preferably from 5 to 6 ring atoms (e.g. a fused heterocyclic group having from 9 to 10 ring atoms), said ring atoms being selected from selected from C, N, S, and O.

Examples of substituents for the R^1 and R^2 groups include alkyl groups (e.g. methyl, ethyl, hexyl), haloalkyl groups (e.g. trifluoromethyl, trichloromethyl, tribromomethyl), alkoxy groups (e.g. methoxy, ethoxy, octyloxy), aryl groups (e.g. phenyl, naphthyl, tolyl), hydroxy groups, halogen atoms, aryloxy groups (e.g. phenyloxy, alkylthio groups (e.g. methylthio, butylthio), arylthio groups (e.g.
30

phenylthio), acyl groups (e.g. acetyl, propionyl, butyryl, valeryl), sulfonyl groups (e.g. methylsulfonyl, phenylsulfonyl), acylamino groups, sulfonylamino groups, acyloxy groups (e.g. acetoxy, benzoxy), cyano groups, amino groups and groups represented by X and Y.

5 Particularly preferred R^1 and R^2 groups include $-(CH_2)_{2-4}-$, especially $-(CH_2)_3-$.

Suitable X and Y groups are those which enhance the solubility of the compound when the developer composition is in solution form. Preferred groups are water solubilising groups including quaternary ammonium groups and
10 carboxylic, sulfonic, sulfinic and phosphonic groups in acid or salt form e.g. COOM wherein M is either a hydrogen atom or a cationic species if the carboxyl group is in its ionised form. The cationic species may be a metal ion or an organic ion. Examples of organic cations include ammonium ions (e.g. ammonium, tetramethylammonium, tetrabutylammonium), phosphonium ions (e.g.
15 tetraphenylphosphonium), and guanidyl groups. Preferably, M is hydrogen or an alkali metal cation, with a sodium or potassium ion being most preferred. The developer solution may comprise a proportion of non-aqueous solvent e.g. diethylene glycol. Marginal water soluble groups may then be chosen. Examples of such groups include acyloxy, alkoxy and aryloxy groups.

20 In a particularly preferred embodiment of the invention, the antisludging agent comprises para-glutaramidophenyldisulfide (the compound of formula (I) wherein A and B each represent paraphenylene, R^1 and R^2 each represent $-(CH_2)_3-$ and, X and Y each represent $-COOM$ wherein M is either a hydrogen atom or a cationic species if the carboxyl group is in its ionised form).

25 The antisludging agent may be present in the developer composition in an amount sufficient to provide a concentration of from 7×10^{-6} to 7×10^{-3} mol/l, preferably from 3.5×10^{-5} to 3.5×10^{-3} mol/l, and most preferably from 7×10^{-5} to 2×10^{-3} mol/l of working strength developing solution.

30 The developer composition may further comprise a compound having the formula

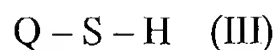


Table 1B: Experimental details.

	Expt. No.	Invention Component	Invention Component Addition(moles x 10 ⁻³ /l in concentrate)	Replenishment Rate(mls/m ²)	Development Time(sec.)
5					
10	1	None	---	400	30
	2	None	---	400	30
	3	GDPD	0.19	400	30
	4	GDPD	0.39	400	30
	5	GDPD	1.92	400	30
15	6	None	---	150	30
	7	GDPD	0.39	150	30
	8	GDPD	1.92	150	30
	9	MTA	4.18	150	30
	10	PDPD	1.58	150	20

GDPD represents p-glutaramidophenyldisulfide, disodium salt.

20 MTA represents the compound of formula (II) wherein A is paraphenylene, R¹ is -(CH₂)₃-, and X is -COOH.

PDPD represents the compound of formula (I) wherein A and B are each paraphenylene, R¹ and R² are each orthophenylene, and X and Y are each SO₃K⁺.

Table 2A

	Disulphide Invention Component	Disulphide Invention Component Addition(moles x 10 ⁻³ /l in concentrate)	Thiol Protecting Component	Thiol Protecting Component Addition(moles x 10 ⁻³ /l in concentrate)	Thiol (moles x 10 ⁻³ /l in concentrate)
5					
10	GDPDA	6.30	---	---	2.22
	GDPDA	6.30	MSA	1.00	2.68
	GDPDA	6.30	MSA	3.00	3.43
	GDPDA	6.30	MSA	9.00	>4.18
	GDPDA	2.10	---	---	0.79
15	GDPDA	2.10	MSA	1.00	1.09
	GDPDA	2.10	MSA	3.00	1.61
	GDPDA	2.10	MSA	9.00	1.63
	GDPDA	2.10	Cysteine	1.24	0.92
	GDPDA	2.10	Cysteine	4.13	1.46
20	GDPDA	2.10	Cysteine	8.26	1.44
	GDPDA	1.58	Cysteine	1.24	0.80

GDPDA represents p-glutaramidophenyldisulfide acid

MSA represents mercaptosuccinic acid

25 In Figures 1 to 3 the results of an accelerated keeping experiment (21 days at 60C) are shown for aliquots of a developer formulation according to Table 1A with and without the presence of a thiol-promoting compound. The analytical technique used was LCMS (liquid chromatography mass spectrometry).

30 Figure 1 represents the results obtained without a thiol promoting compound.

Figure 2 represents the results obtained when the developer composition contained 9×10^{-2} moles/l of sodium erythorbate.



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BIBDATASHEET**CONFIRMATION NO. 1164**

Bib Data Sheet

SERIAL NUMBER 10/051,667	FILING DATE 01/18/2002 RULE	CLASS 430	GROUP ART UNIT 1752	ATTORNEY DOCKET NO. 82306JLT	
APPLICANTS Paul M. Magee, London, UNITED KINGDOM; Brian J. Parker, Hertfordshire, UNITED KINGDOM; Nicholas A. Pightling, Ruislip Manor, UNITED KINGDOM; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** UNITED KINGDOM 0103527.8 02/13/2001 IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 02/15/2002					
Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance Verified and Acknowledged _____ Examiner's Signature Initials		STATE OR COUNTRY UNITED KINGDOM	SHEETS DRAWING 2	TOTAL CLAIMS 23	INDEPENDENT CLAIMS 3
ADDRESS Paul A. Leipold Patent Legal Staff Eastman Kodak Company 343 State Street Rochester , NY 14650-2201					
TITLE Photographic developing composition and use thereof in the development of a photographic element					
FILING FEE RECEIVED	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time)		

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STR

L2 FILE 'REGISTRY' ENTERED AT 11:51:05 ON 19 MAR 2003
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L5 STR
L6 28 S (L1 NOT L4) AND L2
L7 STR L1
L8 1 S (L6 NOT L4) AND L2
L9 SCR 1771 OR 1816
L10 45 S (L6 NOT L4) AND L2 AND L8
L11 STR L6
L12 45 S (L10 NOT L4) AND L2 AND L8
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SAV L12 LE667/A

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STR L10

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L18 113 S (AGX OR AGX2 OR AGF OR AGF2 OR AGCL OR AGCL2 OR AGBR OR
L19 720 S PHOTOG? OR IMAGE# OR IMAGING# OR PHOTOIMAG? OR REPROG?
809 S 74/SC,SX

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L23 38394 S L12
L24 32264 S L15
L25 58 S L23 AND L21
23 S L24 AND (L18 OR L19)

L26 129 S L22 AND L21
 L27 88 S L26 AND (L18 OR L19)
 L28 83 S L27 AND 1907-2001/PY
 L29 80 S L28 AND P/DT
 L30 QUE DEVELOP?
 L31 41 S L29 AND L30

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 L33 269 S 333.521.14/RID

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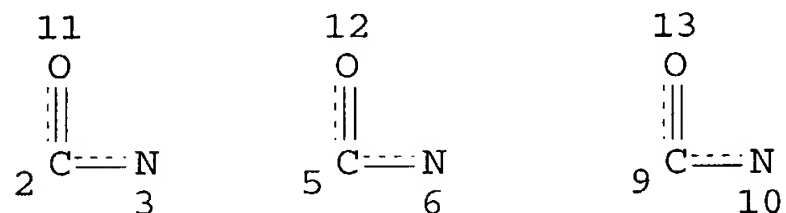
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 L36 19 S L29 AND L35
 L37 35863 S B(A)W OR BLACK?(2A)WHITE? OR MONOCHROM?
 L38 2 S L29 AND L37
 L39 3 S L22 AND L21 AND (L18 OR L19) AND L37
 L40 3 S L38 OR L39
 L41 22 S L25 NOT L40
 L42 10 S L36 NOT (L40 OR L41)
 L43 8 S L36 AND L41
 L44 22 S L41 OR L43
 L45 26 S L31 NOT (L40 OR L44 OR L42)

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L2 SCR 1267
 L4 STR



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DEFAULT ECLEVEL IS LIMITED

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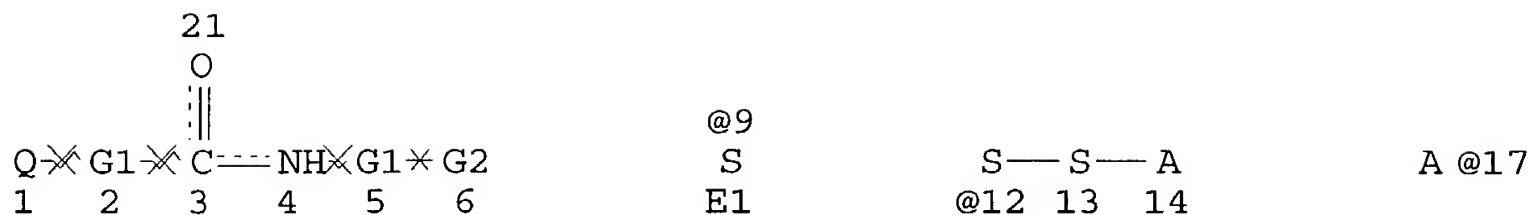
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STEREO ATTRIBUTES: NONE

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L10 STR



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VAR G2=9/12

NODE ATTRIBUTES:

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CONNECT IS E1 RC AT 9

DEFAULT MLEVEL IS ATOM

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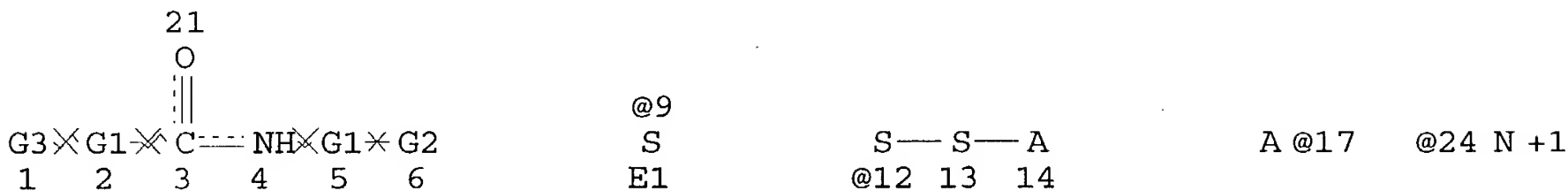
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NUMBER OF NODES IS 12

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L12 5883 SEA FILE=REGISTRY SSS FUL (L10 NOT L4) AND L2 AND L8

L13 STR



REP G1=(1-10) 17

VAR G2=9/12

VAR G3=24/COOH/SO3H/OSO3H/PO3H2/OPO3H2

NODE ATTRIBUTES:

CHARGE IS E+1 AT 24

HCOUNT IS E1 AT 9

NSPEC IS RC AT 14

NSPEC IS RC AT 17

NSPEC IS RC AT 24

CONNECT IS E1 RC AT 9

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

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NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L15 1080 SEA FILE=REGISTRY SUB=L12 SSS FUL L13

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L40 ANSWER 1 OF 3 HCA COPYRIGHT 2003 ACS

137:177051 **Photographic** developing composition to inhibit
sludge deposition. Magee, P. M.; Parker, B. J.; Pightling, N. A.
(Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1231504 A2
20020814, 19 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR,
GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY,
AL, TR. (English). CODEN: EPXXDW. APPLICATION: EP 2002-75531
20020208. PRIORITY: GB 2001-3527 20010213.

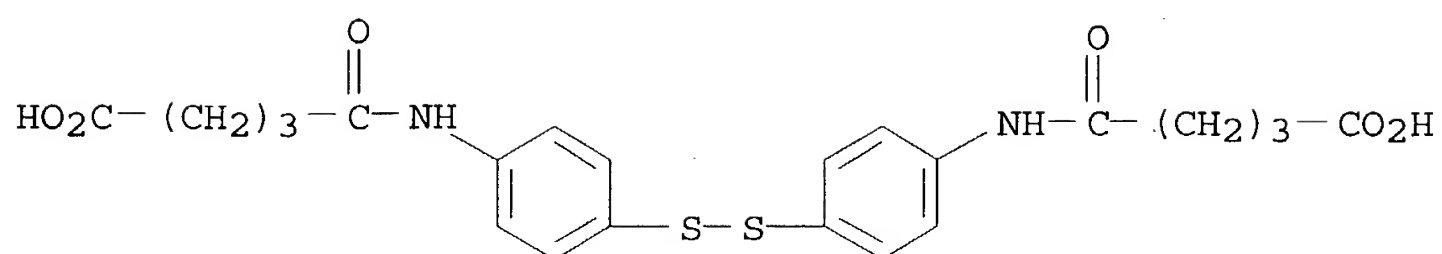
AB Disclosed is a **photog.** developer compn. for use in the
development of a **black and white silver**
halide photog. film that comprises at least one
developing agent and, in an amt. sufficient to inhibit sludge
deposition, one or more compds. selected from compds. having the
formula X-R1-CONH-A-S-S-B-NHCO-R2-Y (A, B = aliph., alicyclic,
arom., heterocyclic; R1, R2 = aliph., alicyclic, arom.,
heterocyclic; X, Y = solubilizing group); and compds. having the
formula X-R1-CONH-A-S-M (A, R1, X are as defined above; M = H, or
cationic species if the sulfur atom is in its ionized form). Use of
the developer compn. of the invention reduces sludge formation.

IT 165116-10-9 208471-42-5 440670-19-9
446265-30-1

(**photog.** developing compn. to inhibit sludge
deposition)

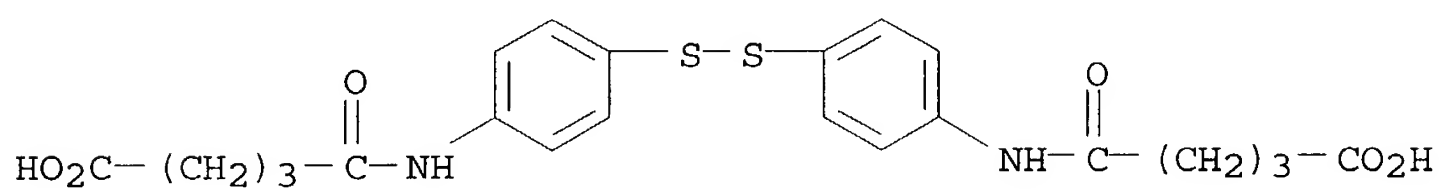
RN 165116-10-9 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-,
disodium salt (9CI) (CA INDEX NAME)

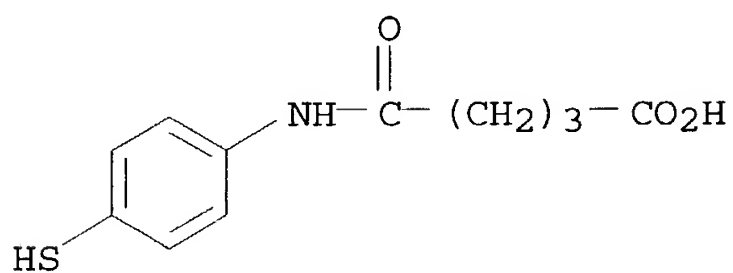


● 2 Na

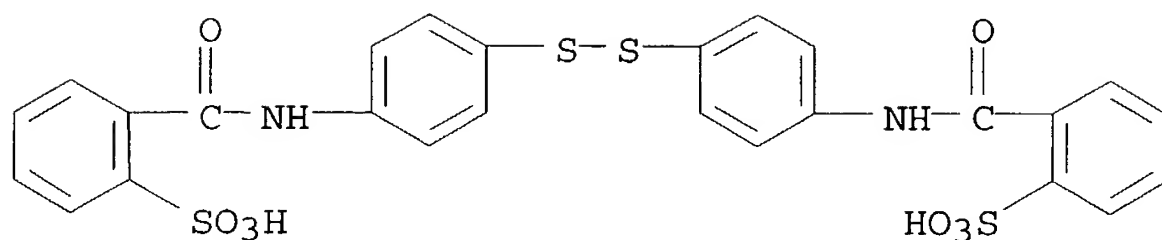
RN 208471-42-5 HCA
 CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo- (9CI)
 (CA INDEX NAME)



RN 440670-19-9 HCA
 CN Pentanoic acid, 5-[(4-mercaptophenyl)amino]-5-oxo- (9CI) (CA INDEX
 NAME)



RN 446265-30-1 HCA
 CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-phenyleneiminocarbonyl)]bis-, dipotassium salt (9CI) (CA INDEX
 NAME)



● 2 K

IC ICM G03C005-30
 CC 74-2 (Radiation Chemistry, Photochemistry, and
 Photographic and Other Reprographic Processes)
 ST **photog** developing compn sludge inhibition film
 IT **Photographic** developers
 (photog. developing compn. to inhibit sludge
 deposition)
 IT 70-49-5, Mercaptosuccinic acid 17697-83-5, 2-
 Mercaptobenzothiazole, silver salt 165116-10-9
 208471-42-5 440670-19-9 446265-30-1
 (photog. developing compn. to inhibit sludge
 deposition)

L40 ANSWER 2 OF 3 HCA COPYRIGHT 2003 ACS

126:110956 **Black-and-white silver**

halide photographic material containing redox
 compound capable of releasing development-inhibitor-releasing
 substance and its processing. Sanpei, Takeshi (Konishiroku Photo
 Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08240876 A2 19960917
 Heisei, 123 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
 1995-337002 19951225. PRIORITY: JP 1994-323065 19941226.

AB In the **black-and-white silver**

halide photog. material contg. a certain concn. of
 a hydrazine deriv. in **Ag halide** emulsion layers
 and their adjacent layers on one side of a support, (1) the
photog. material is virtually free of a dihydroxybenzene
 compd., (2) the **photog.** material is developed by a soln.
 contg. $R_1CH(OH)C(=O)(X)_kR_2$ ($R_{1,2}$ = alkyl, amino, alkoxy, alkylthio;
 $k = 0, 1$; when $k = 1$, $X = CO, CS$) or $R_1C(OM_1)=C(OM_2)(X)_kR_2$ ($M_{1,2}$ =
 alkali metal), and (3) .gtoreq.1 **Ag halide**
 emulsion layer contains .gtoreq.1 redox compd. capable of releasing
 a DIR substance upon oxidn. The process uses a developer which
 contains a transition metal complex salt-based developing agent but
 is virtually free of a dihydroxybenzene compd. The **photog**
 . material exhibited little black dots and little fluctuation in
 sensitivity and gradation.

IT 182560-40-3

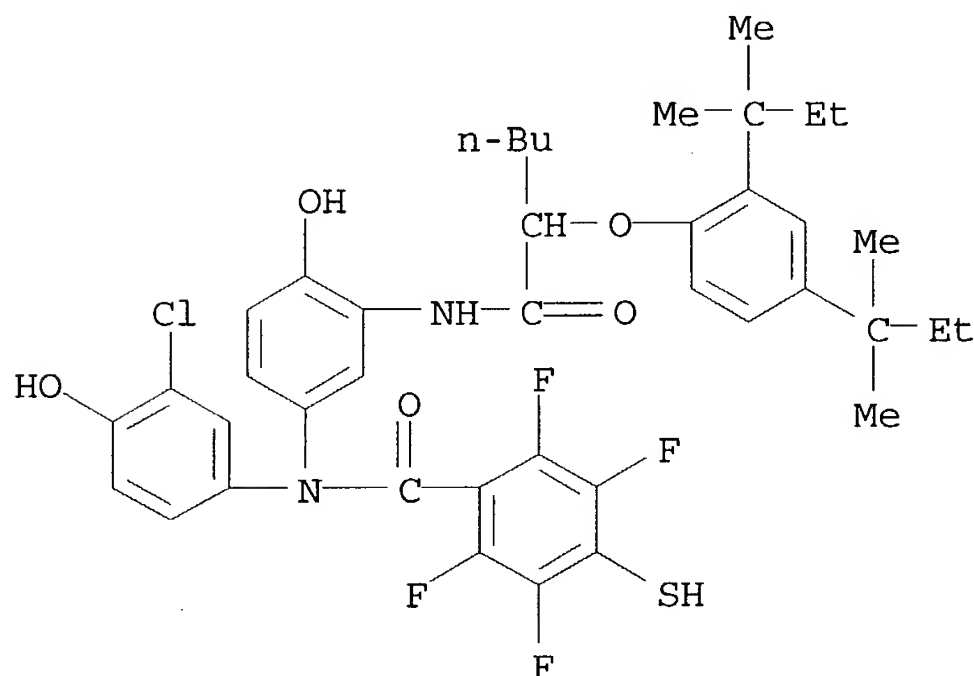
(**black-and-white silver**

halide photog. material contg. redox compd.

capable of releasing development-inhibitor-releasing substance and its processing)

RN 182560-40-3 HCA

CN Benzamide, N-[3-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-4-hydroxyphenyl]-N-(3-chloro-4-hydroxyphenyl)-2,3,5,6-tetrafluoro-4-mercapto- (9CI) (CA INDEX NAME)



IC ICM G03C001-06
ICS G03C001-04; G03C001-295; G03C001-43; G03C001-83; G03C005-26; G03C005-29; G03C005-30; G03C005-305; G03C005-31

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST back and white **photog** material processing; development inhibitor releasing substance **photog** emulsion; DIR releasing redox compd **photog** emulsion

IT **Photographic** developers
Photographic development
Photographic emulsions
(**black-and-white silver halide photog.** material contg. redox compd. capable of releasing development-inhibitor-releasing substance and its processing)

IT **Photographic** couplers
(development-inhibitor-releasing; **black-and-white silver halide photog.** material contg. redox compd. capable of releasing development-inhibitor-releasing substance and its processing)

IT 50-81-7, L-Ascorbic acid, uses 136-85-6, 5-Methylbenzotriazole 2010-19-7 5401-94-5, 5-Nitroindazole 23249-95-8 51588-85-3 81362-14-3 132184-77-1 138981-32-5 **182560-40-3**
185804-99-3 185805-00-9 185805-01-0 185805-02-1 185805-03-2
185805-07-6 185805-08-7 185805-09-8 185805-10-1 185805-11-2
185805-12-3 185805-13-4 185805-14-5 185805-15-6 185805-16-7

(**black-and-white silver**

halide photog. material contg. redox compd.

capable of releasing development-inhibitor-releasing substance and its processing)

IT 76774-24-8, Acrylic acid- sodium acrylate- ethylene glycol dimethacrylate copolymer 113723-38-9 177097-70-0 185805-04-3 185805-05-4 185805-06-5

(**black-and-white silver**

halide photog. material contg. redox compd.

capable of releasing development-inhibitor-releasing substance and its processing)

IT 6783-74-0, 9H-Thioxanthen-9-ol 108732-94-1 174863-21-9 178449-83-7 184888-80-0 185614-18-0

(nucleation promoting agent; **black-and-white**

silver halide photog. material contg.

redox compd. capable of releasing development-inhibitor-releasing substance and its processing)

L40 ANSWER 3 OF 3 HCA COPYRIGHT 2003 ACS

125:312336 Ultra high-contrast **black-and-white**

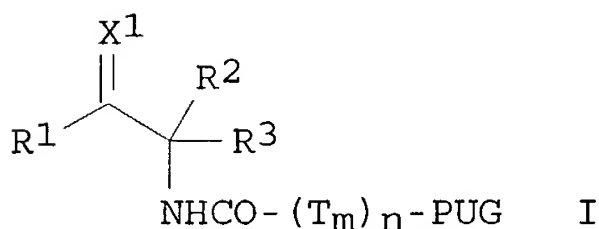
silver halide photographic material, its

manufacture and **image** formation using same. Yamada,

Taketoshi; Miura, Akio; Komamura, Tawara (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08201957 A2 19960809

Heisei, 37 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-8210 19950123.

GI



AB In the title **photog.** material having .gtoreq.1 hydrophilic colloid layer and .gtoreq.1 **Ag halide** emulsion layer, the hydrophilic colloid layer contains a compd. capable of releasing a compd. useful for **photog.** on being oxidized. A group specified compds. contained in the hydrophilic colloid layer is claimed, e.g. I (R1 = alkyl, aryl, heterocyclyl; R2, R3 = H, acyl, carbamoyl, cyano, nitro, sulfonyl, aryl, oxalyl, heterocyclyl, alkoxycarbonyl, aryloxycarbonyl; X1 = O, NH, Tm = timing group, n = 0, 1; PUG = development suppressing agent). 11 Modifications of the **photog.** material including the specified compds. group and **image** formation including developing at pH .ltoreq.11 are also claimed.

IT 182926-61-0

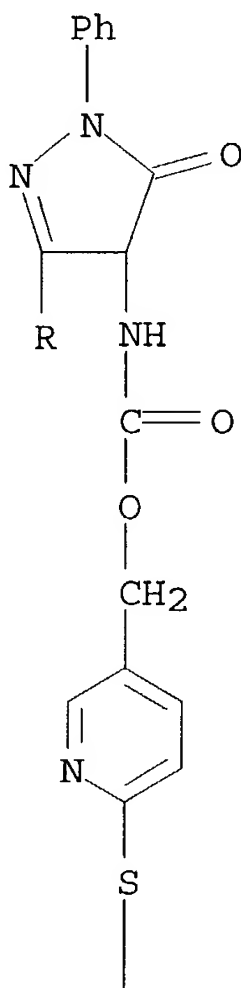
(development suppressing agent for ultra high-contrast

black-and-white photog. material)

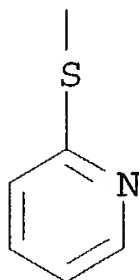
RN 182926-61-0 HCA

CN Carbamic acid, [3-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-3-methyl-1-oxobutyl]amino]-4,5-dihydro-5-oxo-1-phenyl-1H-pyrazol-4-yl]-, [6-(2-pyridinyldithio)-3-pyridinyl]methyl ester (9CI) (CA INDEX NAME)

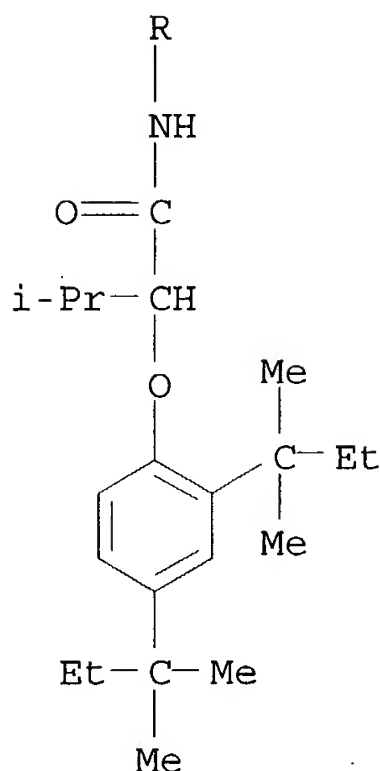
PAGE 1-A



PAGE 2-A



PAGE 3-A



IC ICM G03C001-43
 ICS G03C001-035; G03C001-06; G03C001-30; G03C001-74; G03C005-29
 CC 74-2 (Radiation Chemistry, Photochemistry, and
 Photographic and Other Reprographic Processes)
 ST **photog** material hardener **image** formation
 IT **Photographic** films
 (contg. specified **Ag halide** grains and
 hardener compd.)
 IT **Photographic** processing
 (development at pH .ltoreq.11 for high-contrast **image**)
 IT 111335-75-2 144232-29-1 177097-65-3 177097-72-2 177097-78-8
 182560-30-1 182560-35-6 182926-56-3 182926-57-4
182926-61-0 182926-62-1 182926-63-2 182926-64-3
 182926-65-4 182926-68-7 182926-72-3 182926-75-6 182926-76-7
 182926-79-0 182926-80-3 182926-82-5 182926-85-8
 (development suppressing agent for ultra high-contrast
black-and-white photog. material)
 IT 16357-59-8 57845-28-0 59457-34-0 63684-49-1 70443-75-3
 115007-14-2 119004-23-8 128188-10-3 139486-50-3 161032-18-4
 (hardener for ultra high-contrast **black-and-**
white photog. material)

=> d 144 1-22 cbib abs hitstr hitind

L44 ANSWER 1 OF 22 HCA COPYRIGHT 2003 ACS
 135:129504 Process for the preparation of high chloride emulsions
 containing iodide. Mehta, Rajesh V.; Budz, Jerzy A.; Hendricks,
 Jess B., III; Stapelfeldt, Heinz E.; Jagannathan, Seshadri;

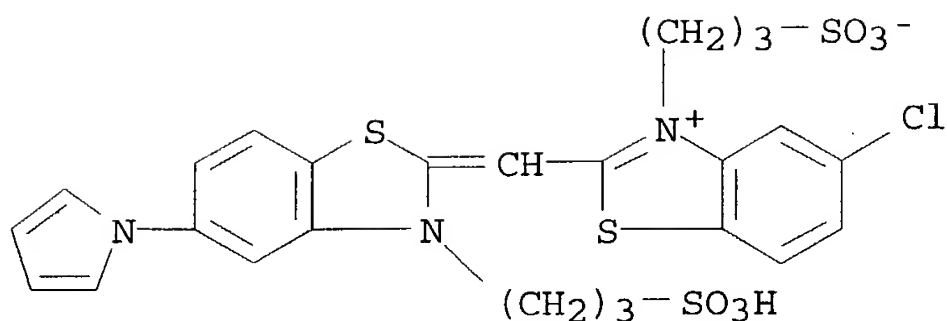
Jagannathan, Ramesh (Eastman Kodak Company, USA). U.S. US 6265145 B1 20010724, 15 pp., Cont.-in-part of U.S. 6,048,683. (English). CODEN: USXXAM. APPLICATION: US 1999-475405 19991230. PRIORITY: US 1998-218683 19981222.

AB The invention is directed to the prepn. of radiation-sensitive silver iodochloride emulsions useful in **photog.** including electronic printing methods where information is recorded in a pixel-by-pixel mode in a radiation-sensitive **silver halide** emulsion layer. A process for the prepn. of a radiation-sensitive **Ag halide** emulsion comprised of high chloride cubical **Ag halide** grains contg. from 0.05 to 3 mol% iodide, based on total Ag, where the iodide is incorporated in the grains in a controlled, nonuniform distribution forming a core contg. at least 50% of total Ag, an iodide free surface shell having a thickness of >50 .ANG., and a sub-surface shell that contains a max. iodide concn. is disclosed, the process comprising: (a) providing in a stirred reaction vessel a dispersing medium and host high chloride **Ag halide** cubical grains comprising a speed enhancing amt. of iodide, and (b) pptg. **Ag halide** onto the host grains by introducing at least a Ag salt soln. into the dispersing medium at a rate such that the normalized molar addn. rate, R_n , is >3.0 .times. 10^{-2} min $^{-1}$, R_n satisfying the formula: $R_n = [Q_f \cdot \text{times} \cdot C_f] / M$ where Q_f is the volumetric rate of addn., in L/min, of Ag salt soln. into the reaction vessel; C_f is the concn., in moles/L, of the Ag salt soln.; and M is total moles of **Ag halide** in the host grains in the reaction vessel at the precise moment of addn. of the Ag salt soln. In a further aspect, this invention is directed towards a **photog.** recording element comprising a support and .gtoreq.1 light sensitive **Ag halide** emulsion layer comprising **Ag halide** grains prepd. as described above. The advantages of the invention are generally accomplished in accordance with the discovery that when the exterior portion of profiled Ag iodochloride grains are grown under specific conditions of high molar addn. rates, iodochloride emulsions of enhanced sensitivity and **photog.** curve shape are produced, as speed can be increased while keeping fog to a low level.

IT 161710-68-5P 208471-42-5P
(prepn. of high **silver chloride** emulsions
contg. iodide using)

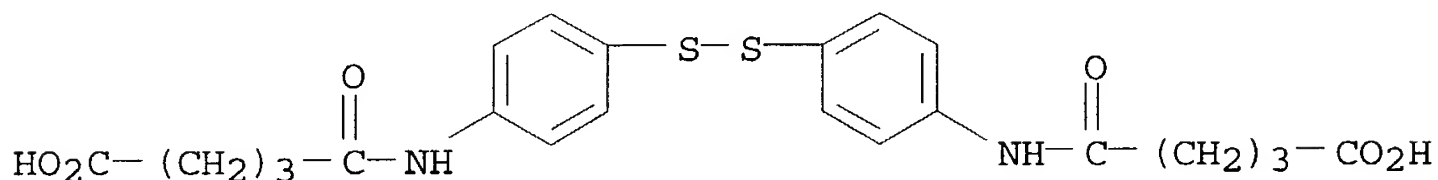
RN 161710-68-5 HCA

CN Benzothiazolium, 5-chloro-2-[[5-(1H-pyrrol-1-yl)-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt
(9CI) (CA INDEX NAME)



RN 208471-42-5 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo- (9CI)
(CA INDEX NAME)



IC ICM G03C001-005

ICS G03C001-035

NCL 430569000

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)

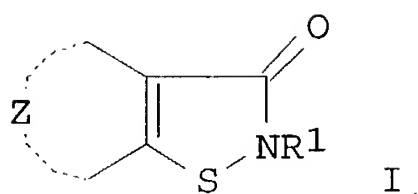
IT **Photographic** emulsions
(prepn. of high **silver chloride** emulsions
contg. iodide using)

IT 5244-34-8P, 1,8-Dihydroxy-3,6-dithiaoctane 14070-48-5P,
1-(3-Acetamidophenyl)-5-mercaptotetrazole 16920-56-2P
20792-40-9P 22615-69-6P **161710-68-5P** 168689-49-4P
172871-88-4P **208471-42-5P** 350990-73-7P, Lippmann bromide
(prepn. of high **silver chloride** emulsions
contg. iodide using)

L44 ANSWER 2 OF 22 HCA COPYRIGHT 2003 ACS

134:259159 Method of suppressing fog using isothiazolinone compounds in
silver halide emulsions. Eikenberry, Jon N.;
Harbison, Kenneth G. (Eastman Kodak Company, USA). U.S. US 6214529
B1 **20010410**, 11 pp., Cont.-in-part of U.S. Ser. No.
177,220, abandoned. (English). CODEN: USXXAM. APPLICATION: US
1999-416822 19991012. PRIORITY: US 1998-177220 19981022.

GI



AB The invention relates to the use of isothiazolinone compds. with light-sensitive **silver halide** emulsions. This invention relates to a method of reducing fog in a **Ag halide** emulsion comprising taking a high fogging emulsion which was chem. sensitized and cooled, holding the high fogging emulsion as a melt in prepn. for coating on a support, and prior to or during the holding, contacting the emulsion with an isothiazoline compd. represented by (I), where R1 is a substituent; and Z contains the C atoms necessary to form a nonarom. ring. It also relates to **Ag halide photog.** elements contg. such emulsions.

IT 55425-23-5 155621-18-4

(method of suppressing fog using isothiazolinone compds. in **silver halide** emulsions contg. antifoggant)

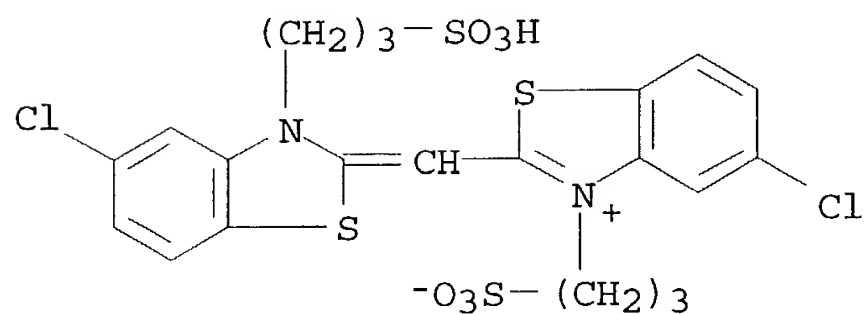
RN 55425-23-5 HCA

CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 55425-22-4

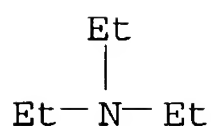
CMF C21 H20 Cl2 N2 O6 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



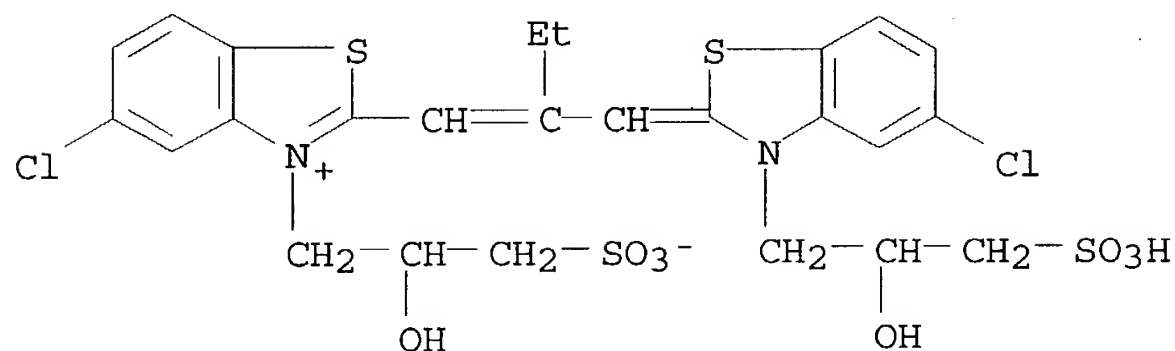
RN 155621-18-4 HCA

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(2-hydroxy-3-sulfopropyl)-2(3H)-benzothiazolylydene]methyl]-1-butenyl]-3-(2-hydroxy-3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 155621-17-3

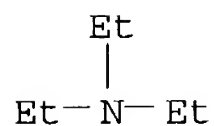
CMF C25 H26 Cl2 N2 O8 S4



CM 2

CRN 121-44-8

CMF C6 H15 N



IT 130017-19-5

(method of suppressing fog using isothiazolinone compds. in **silver halide** emulsions contg. gold sensitizer)

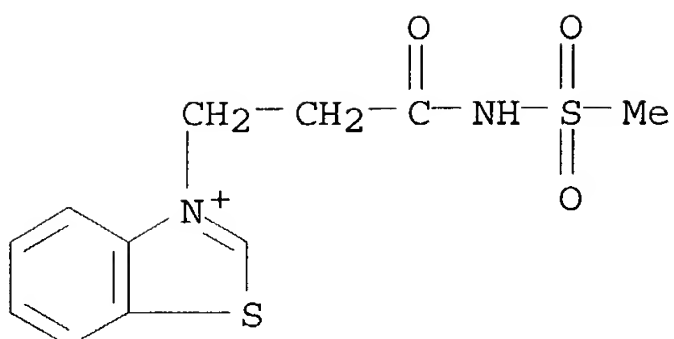
RN 130017-19-5 HCA

CN Benzothiazolium, 3-[3-[(methylsulfonyl)amino]-3-oxopropyl]-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 130017-18-4

CMF C11 H13 N2 O3 S2

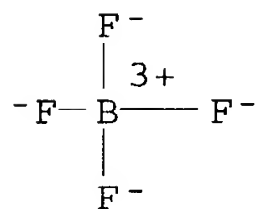


CM 2

CRN 14874-70-5

CMF B F4

CCI CCS



IT 27268-50-4

(method of suppressing fog using isothiazolinone compds. in
silver halide emulsions contg. spectral
 sensitizing dye)

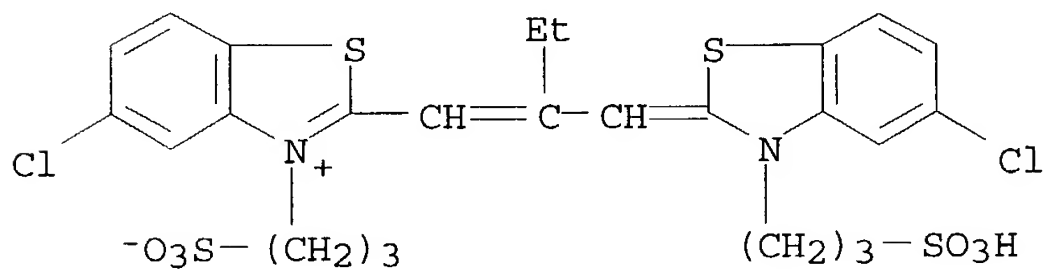
RN 27268-50-4 HCA

CN Benzothiazolium, 5-chloro-2-[2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-
 benzothiazolylidene]methyl]-1-butenyl]-3-(3-sulfopropyl)-, inner
 salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

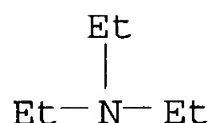
CRN 23568-98-1

CMF C25 H26 Cl2 N2 O6 S4

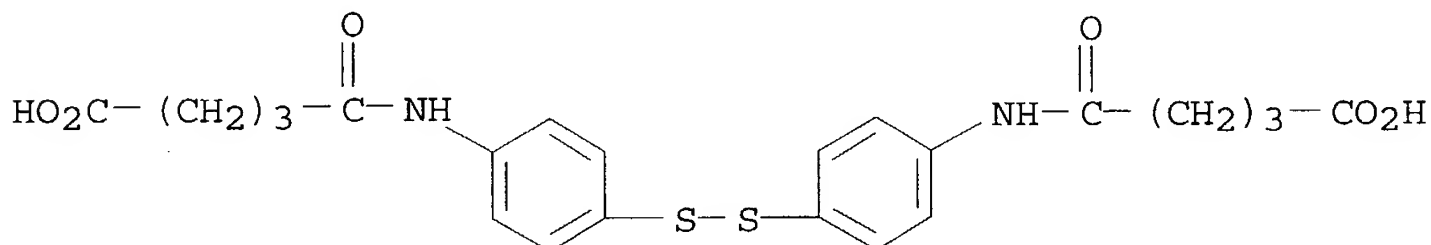


CM 2

CRN 121-44-8
CMF C6 H15 N



IT 165116-10-9
(method of suppressing fog using isothiazolinone compds. in
silver halide emulsions contg. sulfur
sensitizer)
RN 165116-10-9 HCA
CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-,
disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C005-18
ICS G03C005-26
NCL 430449000
CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
IT **Photographic emulsions**
Photographic fog inhibitors
(method of suppressing fog using isothiazolinone compds. in
silver halide emulsions contg. sulfur
sensitizer)
IT 2503-56-2 55425-23-5 155621-18-4 160681-94-7
(method of suppressing fog using isothiazolinone compds. in
silver halide emulsions contg. antifoggant)
IT 130017-19-5
(method of suppressing fog using isothiazolinone compds. in
silver halide emulsions contg. gold sensitizer)
IT 27268-50-4 219117-64-3
(method of suppressing fog using isothiazolinone compds. in
silver halide emulsions contg. spectral
sensitizing dye)
IT 2682-20-4D, chloro derivs. 15283-45-1 82633-79-2 142056-80-2
165116-10-9 329182-19-6

(method of suppressing fog using isothiazolinone compds. in **silver halide** emulsions contg. sulfur sensitizer)

L44 ANSWER 3 OF 22 HCA COPYRIGHT 2003 ACS

133:342409 **Photographic** element comprising a mixture of sensitizing dyes. Klingman, Karen J.; Kahn, Bruce E.; Parton, Richard L.; Dobles, Thomas R.; Stegman, David A.; Smith, Teresa A.; Lewis, John D. (Eastman Kodak Company, USA). U.S. US 6140035 A 20001031, 22 pp. (English). CODEN: USXXAM. APPLICATION: US 1998-151123 19980910.

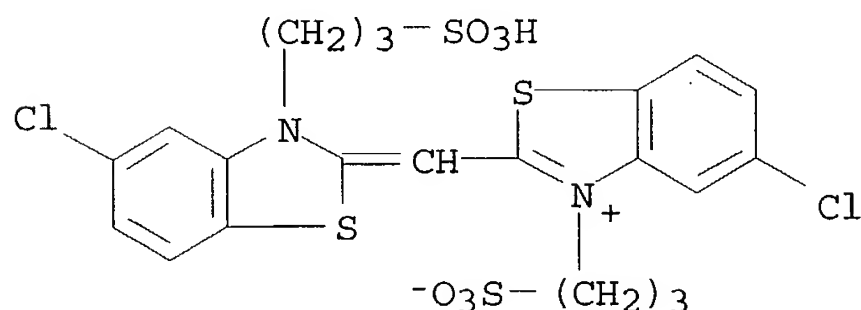
AB A **photog.** element comprises at least one **silver halide** emulsion layer in which: the **silver halide** has been spectrally sensitized with a first blue sensitizing dye having a λ_1 less than or equal to about 475 nm and a second blue sensitizing dye having a λ_2 , wherein the following relationship is met: $0.12(\text{eV}) \geq 1.25(\text{nm})(\text{eV}) \times 10^3 (1/\lambda_2 - 1/\lambda_1)$ (λ_1 is the wavelength in nanometers (nm) of max. absorption of a **silver halide** emulsion sensitized with the first dye and λ_2 is the wavelength of max. absorption of a **silver halide** emulsion sensitized with the second dye, with the proviso that neither the first nor the second dye contains selenium). The **silver halide** emulsion of said layer is chem. sensitized with a gold(I) compd. and preferably with the combination of a gold compd. and a disulfide compd.; and the **silver halide** has been chem. sensitized with a gold compd. of formula AuL_2X^- or $\text{AuL}(\text{L}_1)\text{X}^-$ (L is a mesoionic compd.; X is an anion; L_1 is a Lewis donor ligand).

IT 55425-22-4 159632-55-0 161710-68-5
169324-94-1 220939-85-5 220939-86-6
220939-87-7 304464-99-1

(**photog.** element comprising mixt. of sensitizing dyes)

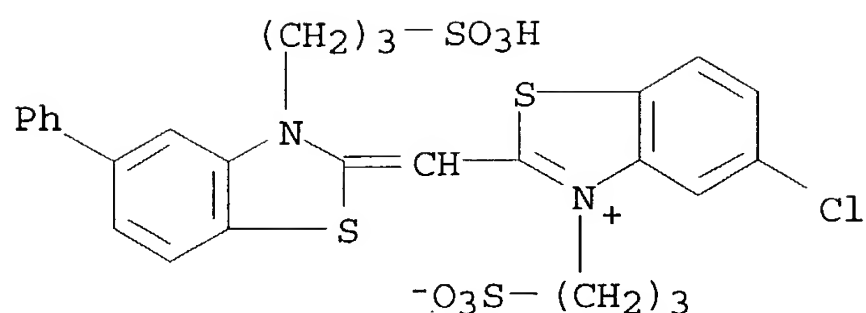
RN 55425-22-4 HCA

CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI)
(CA INDEX NAME)



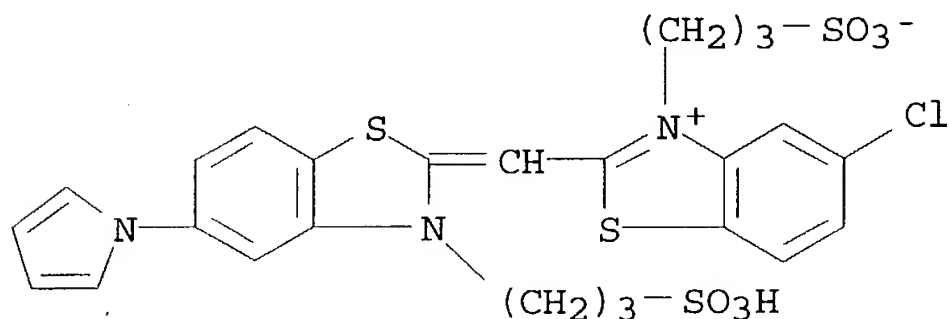
RN 159632-55-0 HCA

CN Benzothiazolium, 5-chloro-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI)
(CA INDEX NAME)



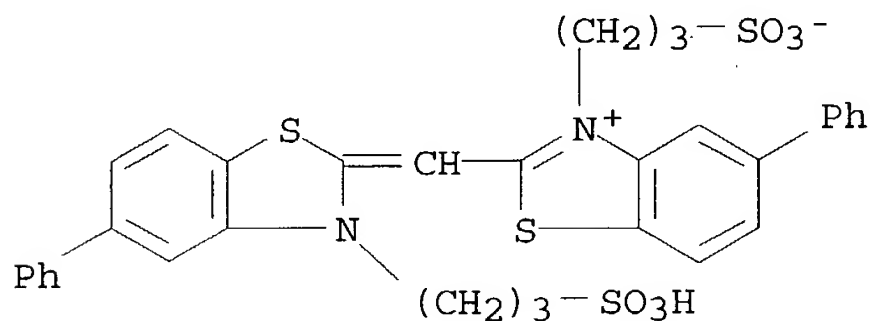
RN 161710-68-5 HCA

CN Benzothiazolium, 5-chloro-2-[[5-(1H-pyrrol-1-yl)-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



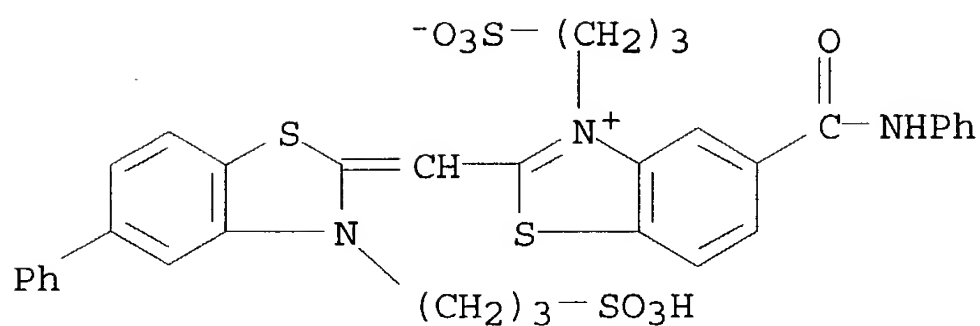
RN 169324-94-1 HCA

CN Benzothiazolium, 5-phenyl-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



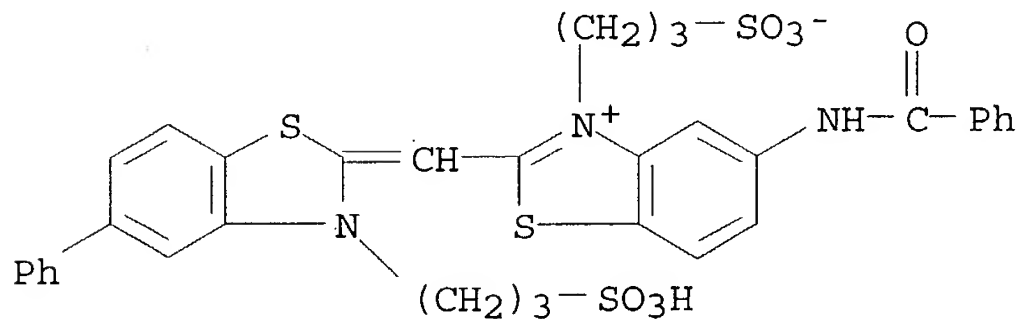
RN 220939-85-5 HCA

CN Benzothiazolium, 5-[(phenylamino)carbonyl]-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



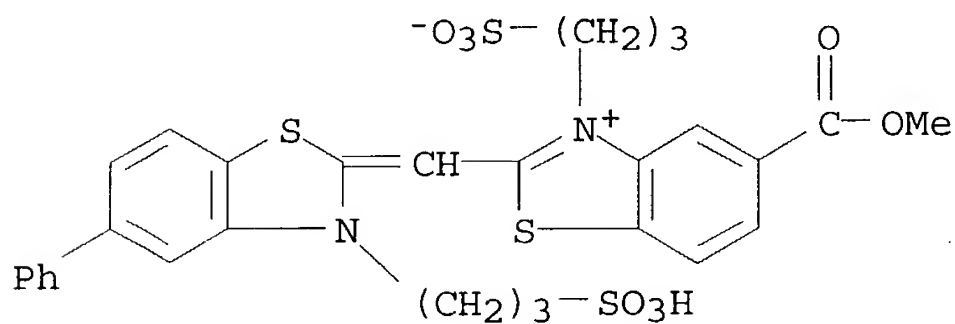
RN 220939-86-6 HCA

CN Benzothiazolium, 5-(benzoylamino)-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



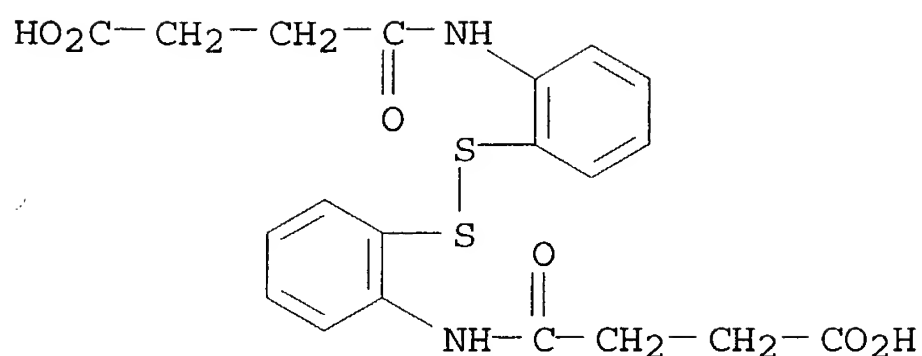
RN 220939-87-7 HCA

CN Benzothiazolium, 5-(methoxycarbonyl)-2-[[5-phenyl-3-(3-sulfopropyl)-2(3H)-benzothiazolylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 304464-99-1 HCA

CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo- (9CI) (CA INDEX NAME)



- IC ICM G03C001-09
ICS G03C001-16; G03C001-29
- NCL 430574000
- CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **photog** material **silver halide** emulsion
photosensitizing cyanine dye; gold compd photosensitizer disulfide
- IT Cyanine dyes
Photographic emulsions
Photosensitizers (pharmaceutical)
(**photog.** element comprising mixt. of sensitizing dyes)
- IT Disulfides
Silver halides
(**photog.** element comprising mixt. of sensitizing dyes)
- IT Dyes
(photosensitizing; **photog.** element comprising mixt. of sensitizing dyes)
- IT 5244-34-8 55425-22-4 138450-95-0 141766-84-9
159632-55-0 161710-68-5 161710-76-5
169324-94-1 174079-63-1 177951-67-6 220939-85-5
220939-86-6 220939-87-7 220939-91-3
220939-92-4 304464-99-1 304465-50-7
(**photog.** element comprising mixt. of sensitizing dyes)
- L44 ANSWER 4 OF 22 HCA COPYRIGHT 2003 ACS
- 131:329804 Novel methine compounds and **silver halide**
photographic material containing same. Kato, Takashi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11305375 A2 19991105 Heisei, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-117453 19980427.
- GI For diagram(s), see printed CA Issue.
- AB Novel methine compds. having thiol group are claimed, which are useful as sensitizing dyes for **Ag halide**
photog. materials. The compds. may have the general formula
I [Z = 5- or 6-membered N-contg. heterocycle which may be condensed with other ring; A = divalent linking group; R1, R2 = alkyl, aryl, heterocyclic group; L1-4 = (substituted) methine; n = 0-4; p = 0 or 1; M = charge-neutralizing ion; m = no. required to neutralize the charge]. A **Ag halide photog.** material
contg. the compd. is also claimed. The compd. is well adsorbed on

Ag halide grains and the the **photog.**
material exhibits high sensitivity.

IT **248605-45-0P**

(hemicyanine dye with thiol group for **photog.**
sensitizer)

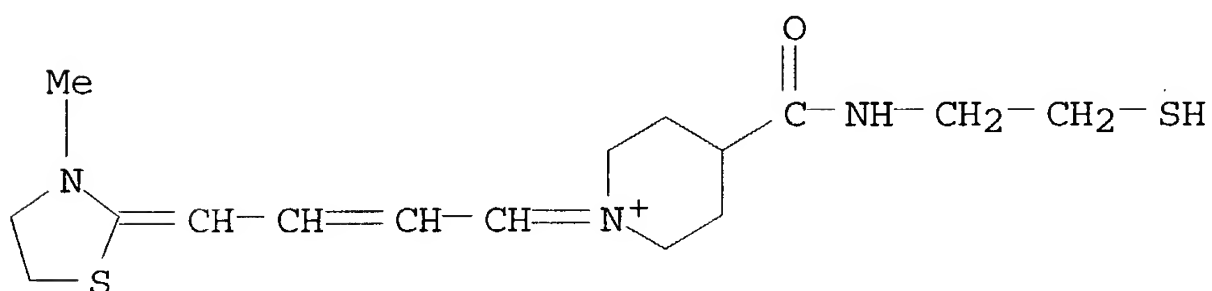
RN 248605-45-0 HCA

CN Piperidinium, 4-[[(2-mercaptoethyl) amino] carbonyl] -1- [4- (3-methyl-2-thiazolidinylidene) -2-butenylidene] -, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 249938-93-0

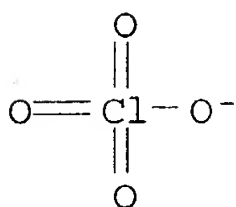
CMF C16 H26 N3 O S2



CM 2

CRN 14797-73-0

CMF Cl O4



IC ICM G03C001-22

ICS C09B023-00

CC **74-2** (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
Section cross-reference(s): 41

ST **photog** sensitizer thiol hemicyanine dye

IT **Photographic** sensitizers

(hemicyanine dye with thiol group for **photog.**
sensitizer)

IT Cyanine dyes

(hemicyanine; hemicyanine dye with thiol group for **photog**
. sensitizer)

IT **248605-45-0P**

(hemicyanine dye with thiol group for **photog.**
sensitizer)

L44 ANSWER 5 OF 22 HCA COPYRIGHT 2003 ACS

129:60532 High-chloride **photographic** emulsion with dimethylamine silver chloroiodide and antifoggant. Budz, Jerzy A.; Jagannathan, Seshadri; Royster, Tommie L., Jr. (Eastman Kodak Co., USA). U.S. US 5759762 A 19980602, 5 pp. (English). CODEN: USXXAM. APPLICATION: US 1997-866577 19970530.

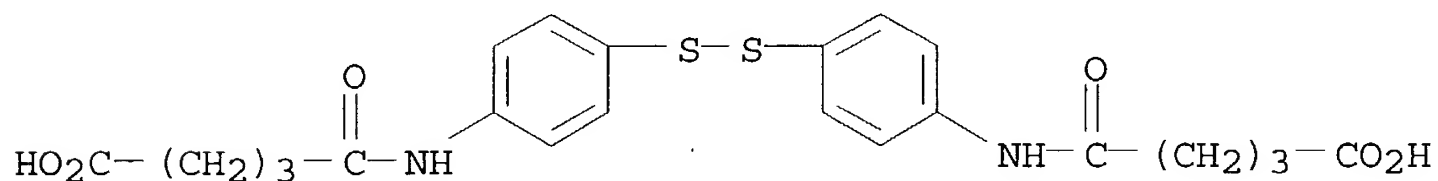
AB A soln. contg. a dimethylamine silver chloroiodide complex is added with an antifoggant to a **silver chloride** emulsion to form a stable Ag(I,Cl) **photog.** emulsion.

IT 208471-42-5

(stable silver chloroiodide **photog** emulsion prepn. using dimethylamine silver chloroiodide complexes and)

RN 208471-42-5 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo- (9CI) (CA INDEX NAME)



IC ICM G03C001-34

NCL 430611000

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST silver chloroiodide **photog** emulsion prepn antifoggant; dimethylamine silver chloroiodide complex **photog** emulsion

IT **Photographic** emulsions

(silver chloroiodide; prepd. using dimethylamine silver chloroiodide complexes and antifoggants)

IT 208471-44-7

(stable silver chloroiodide **photog** emulsion prepn. using)

IT 208471-42-5 208540-87-8, Nalco 2341

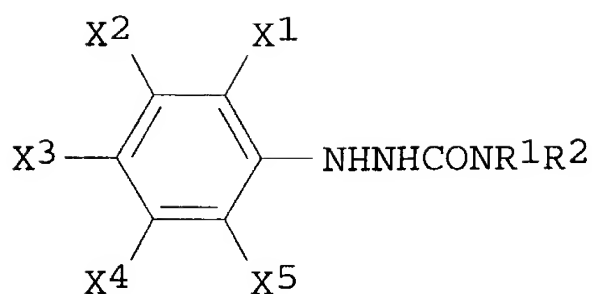
(stable silver chloroiodide **photog** emulsion prepn. using dimethylamine silver chloroiodide complexes and)

L44 ANSWER 6 OF 22 HCA COPYRIGHT 2003 ACS

127:197699 **Silver halide photographic**

light-sensitive material containing **photographic** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent. Hirano, Katsuki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09211814 A2 19970815 Heisei, 95 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-287288 19961011. PRIORITY: JP 1995-334197 19951130.

GI

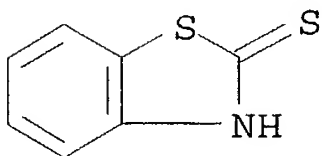


AB In a **silver halide photog.** light-sensitive material possessing at least one **photog.** layer on a support, any of these **photog.** layers contains a dye-forming coupler, a coloration reducing agent represented by a hydrazine deriv. (I) and $R_3\text{NHNHCONR}_1\text{R}_2$ [$R_1, R_2 = \text{H, substituent; } X_1 - X_5 = \text{H, substituent;}$ provided that a sum total of Hammett substituent const. (σ_p) value of X_1, X_3 , and X_5 and Hammett substituent const. (σ_m) of X_2 and X_4 is ≤ 0.80 to ≤ 3.80 ; $R_3 = \text{heterocyclyl}$], and at least one stabilizers selected from (A) mercaptoheterocyclic compds. contg. SH group bonded to the C atom linked to the adjacent N atom, (B) quaternary arom. chalcogen azolium salts where the chalcogen is S, Se, or Te, (C) triazole or tetrazole possessing an ionic H bonded to the N atom of the heterocyclics, (D) dichalcogenides contg. a -X-X- bond between C atoms where X = divalent S, Se, or Te, and (E) org. compds. possessing a partial structure of thiosulfinic acid SO_2SM (M = proton or cation) or salt. This **photog.** material possesses high sensitivity and excellent storage stability, is capable of undergoing rapid processing, and can form **images** by substantially processing with an alkali bath alone for development.

IT 149-30-4, 2-Mercaptobenzothiazole
 2785-06-0 16407-55-9 38650-26-9
 104653-51-2 165116-10-9
 (photog. stabilizer; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylethylhydrazine as coloration reducing agent)

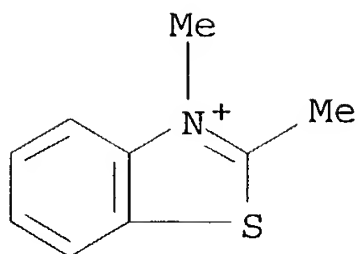
RN 149-30-4 HCA

CN 2(3H)-Benzothiazolethione (9CI) (CA INDEX NAME)

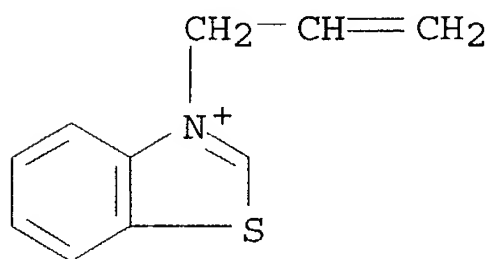


RN 2785-06-0 HCA

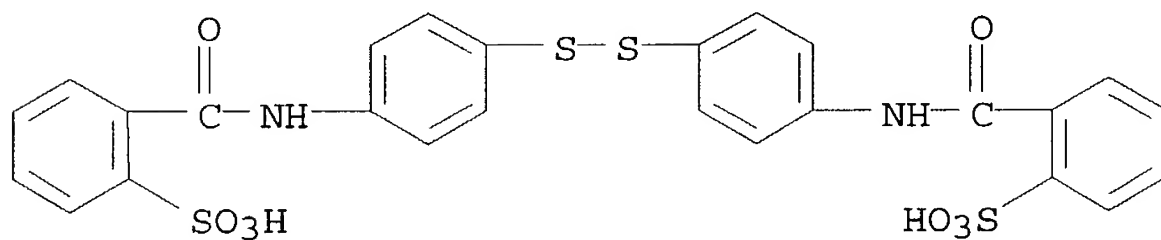
CN Benzothiazolium, 2,3-dimethyl-, iodide (8CI, 9CI) (CA INDEX NAME)

● I⁻

RN 16407-55-9 HCA
 CN Benzothiazolium, 3-(2-propenyl)-, bromide (9CI) (CA INDEX NAME)

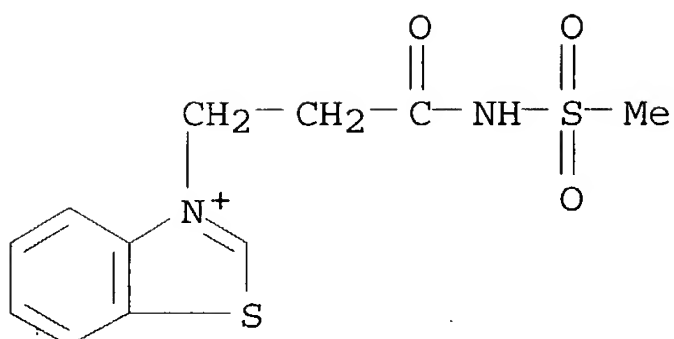
● Br⁻

RN 38650-26-9 HCA
 CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-phenyleneiminocarbonyl)]bis-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

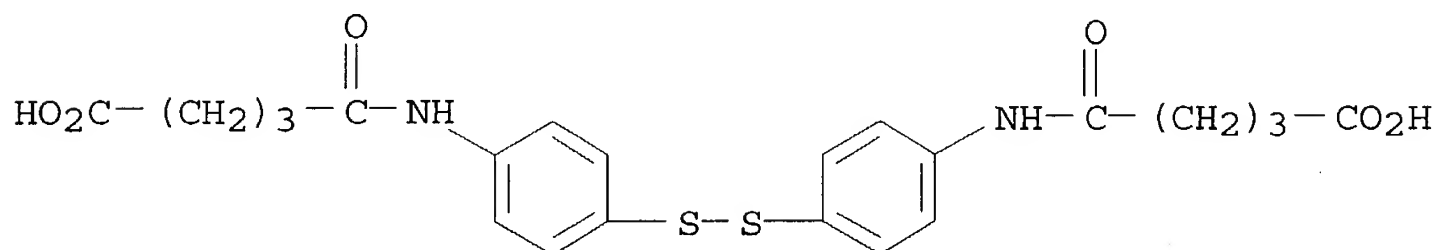
RN 104653-51-2 HCA
 CN Benzothiazolium, 3-[3-[(methylsulfonyl)amino]-3-oxopropyl]-, bromide (9CI) (CA INDEX NAME)



● Br⁻

RN 165116-10-9 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C007-392

ICS G03C007-392; G03C001-035; G03C001-42; G03C007-00

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **photog** material; mercaptoheterocycle **photog** stabilizer; phenylcarbamoylhydrazine coloration reducing agent; quaternary arom chalcogen azolium salt; triazole tetrazole **photog** stabilizer; dichalcogenide **photog** stabilizer

IT **Photographic** films

(color; **silver halide photog.**

light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)

IT Chalcogenides

(dichalcogenides for **photog.** stabilizers;

silver halide photog. light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)

- IT Heterocyclic compounds
(mercaptoheterocyclic compds.; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)
- IT Quaternary ammonium compounds, uses
(quaternary arom. chalcogen azolium salts; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)
- IT **Photographic stabilizers**
(**silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)
- IT 182296-98-6 182297-11-6 182297-15-0 182297-31-0
(coloration reducing agent; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)
- IT 626-67-5D, reaction products with chloromethylated poly(divinylbenzene-styrene) 9003-70-7D, chloromethylated, reaction products with N-methylpiperidine
(mordant; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)
- IT 185841-55-8 185841-57-0 194160-98-0
(**photog.** coupler; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)
- IT 94-97-3 **149-30-4, 2-Mercaptobenzothiazole**
1077-28-7, 1,2-Dithiolane-3-pentanoic acid 1887-29-2, Sodium benzenethiosulfonate **2785-06-0** 3753-27-3, Sodium 4-methylbenzenethiosulfonate 6264-40-0, 2-Mercapto-5-methylthio-1,3,4-thiadiazole **16407-55-9** 16766-09-9 35523-67-2 **38650-26-9** 62652-61-3, Sodium octylthiosulfonate 89853-03-2 99131-26-7 **104653-51-2** 110742-22-8 128626-71-1 **165116-10-9** 190123-72-9 194160-97-9
(**photog.** stabilizer; **silver halide photog.** light-sensitive material contg. **photog.** stabilizer and N-phenyl-N'-carbamoylhydrazine as coloration reducing agent)
- L44 ANSWER 7 OF 22 HCA COPYRIGHT 2003 ACS
127:57960 **Silver halide photographic**
emulsion containing stabilizer for low-fog images.
Kubodera, Mitsuhiro; Ikeda, Takeshi; Tanaka, Shigeo (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 09138478 A2 **19970527**
Heisei, 65 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-296893 19951115.
- AB The **photog.** emulsion with **AgCl** content
.gtoreq.95 mol.% contains (A) .gtoreq.1 supersatd. sensitizing dye,

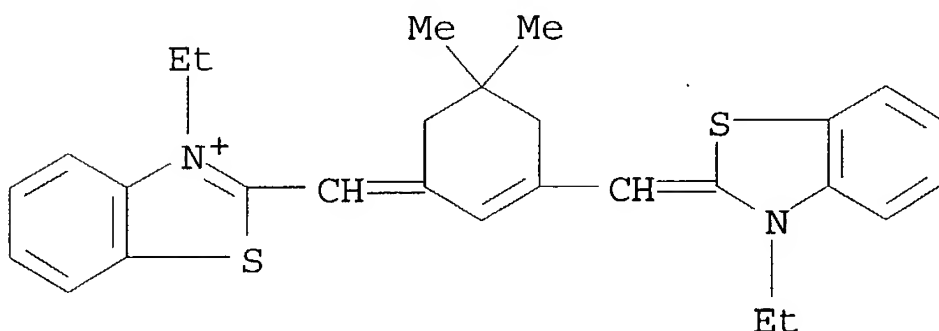
(B) .gtoreq.1 N-contg. heterocyclic mercapto deriv. soln. with degree of dissocn. .gtoreq.0.99, and (C) .gtoreq.1 compd. selected from (a) a compd. contg. a connection part comprising .gtoreq.3 S, .gtoreq.3 Se, or .gtoreq.3 Te, (b) an org. compd. having a heterocycle not contg. a connection part comprising .gtoreq.2 S, .gtoreq.2 Se, or .gtoreq.2 Te, (c) R11X11X12R12 (X11-12 = S, Se, Te; R11-12 = at. group needed to form cyclic, acyclic, heterocyclic group), and (d) S or thiosulfonic acid derivs. R21SO2SM21 or R31X31O2M31 (R21, R31 = aliph., arom., heterocyclic group; M21, M31 = H, monovalent cation; X31 = S, Se). The emulsion shows good storage stability and high sensitivity and gives low-fog images.

IT 70211-26-6 83846-69-9 113477-02-4
154218-34-5

(sensitizing dye; **silver halide**
photog. emulsion contg. stabilizer for low-fog
images with high sensitivity)

RN 70211-26-6 HCA

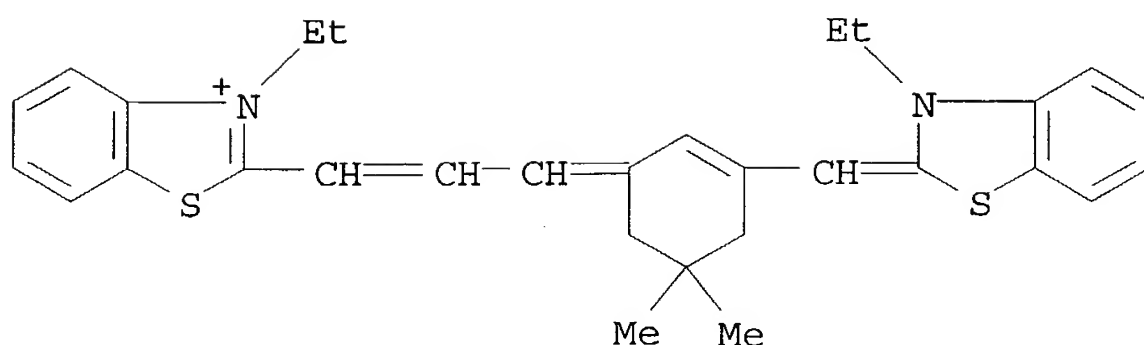
CN Benzothiazolium, 3-ethyl-2-[[3-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]methyl]-, bromide (9CI) (CA INDEX NAME)



● Br⁻

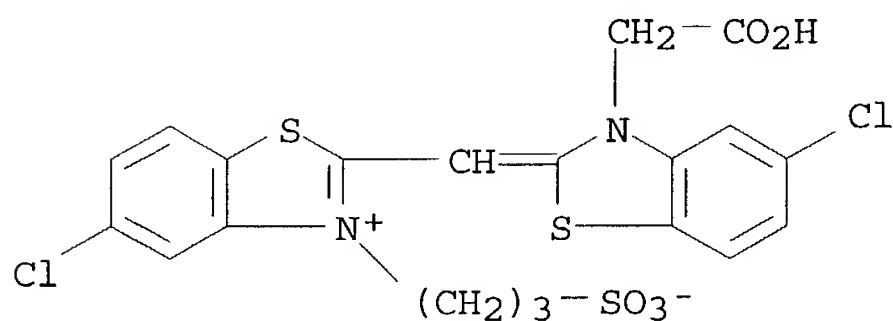
RN 83846-69-9 HCA

CN Benzothiazolium, 3-ethyl-2-[3-[3-[(3-ethyl-2(3H)-benzothiazolylidene)methyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

● I⁻

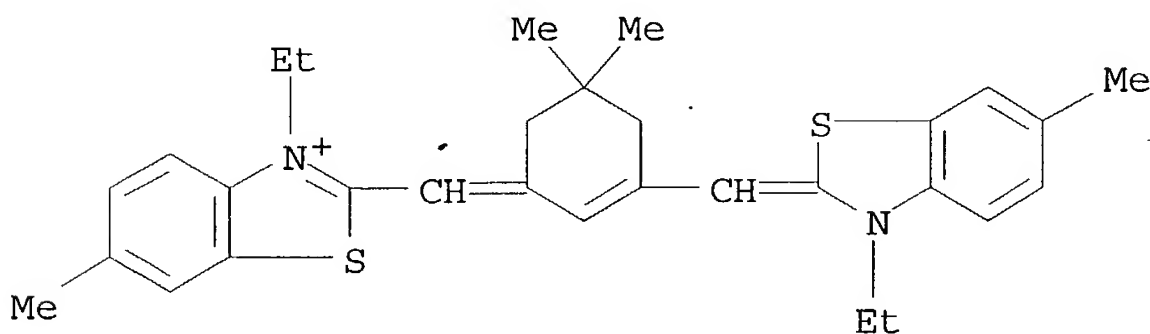
RN 113477-02-4 HCA

CN Benzothiazolium, 2-[[3-(carboxymethyl)-5-chloro-2(3H)-benzothiazolylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 154218-34-5 HCA

CN Benzothiazolium, 3-ethyl-2-[[3-[(3-ethyl-6-methyl-2(3H)-benzothiazolylidene)methyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]methyl]-6-methyl-, bromide (9CI) (CA INDEX NAME)

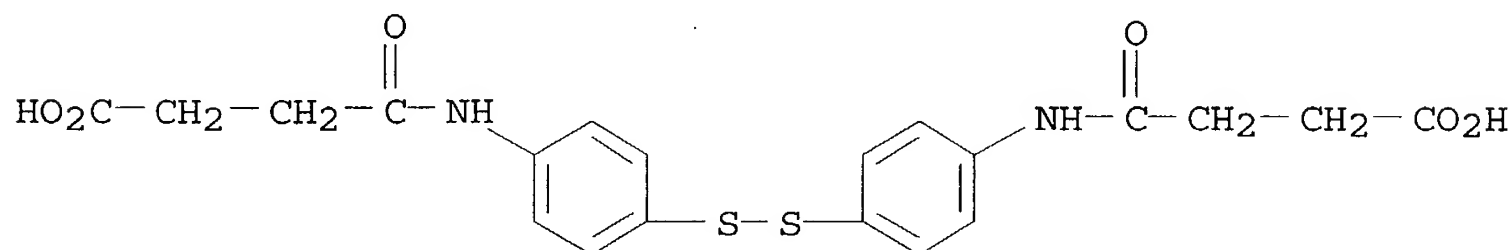
● Br⁻

IT 165116-08-5

(silver halide photog. emulsion
contg. stabilizer for low-fog images with high
sensitivity)

RN 165116-08-5 HCA

CN Butanoic acid, 4,4'-[dithiobis(4,1-phenyleneimino)]bis[4-oxo-,
disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-34

ICS G03C001-035; G03C001-09; G03C001-14; G03C007-00

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)

ST photog emulsion sulfur selenium tellurium stabilizer;
sensitizing dye supersatd photog emulsion; heterocycle
mercapto fog inhibitor photog emulsion

IT Photographic emulsions

Photographic fog inhibitors

Photographic sensitizers

(silver halide photog. emulsion

contg. stabilizer for low-fog images with high
sensitivity)

IT 86-93-1 583-39-1 3179-31-5 7271-44-5 14070-48-5 15182-68-0
32873-56-6 68744-65-0

(fog inhibitor; silver halide photog

. emulsion contg. stabilizer for low-fog images with
high sensitivity)

IT 6200-35-7 47867-58-3 70211-20-0 70211-26-6

83846-69-9 113477-02-4 116528-52-0

154218-34-5

(sensitizing dye; silver halide

photog. emulsion contg. stabilizer for low-fog
images with high sensitivity)

IT 103-34-4 538-70-5, 1,2-Dithiane-3-butanoic acid 657-84-1

930-35-8, 1,3-Dithiole-2-thione 934-36-1, 1,3-Benzodithiole-2-

thione 971-15-3 1077-28-7, 1,2-Dithiolane-3-pentanoic acid

3354-42-5, 3H-1,2-Benzodithiole-3-thione 7704-34-9, Sulfur, uses

16766-09-9 28519-50-8 165116-08-5

(silver halide photog. emulsion

contg. stabilizer for low-fog images with high
sensitivity)

L44 ANSWER 8 OF 22 HCA COPYRIGHT 2003 ACS

127:57954 **Silver halide photographic**

material with improved storage stability. Nojima, Hiroyuki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09138474 A2 19970527 Heisei, 55 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-318439 19951114.

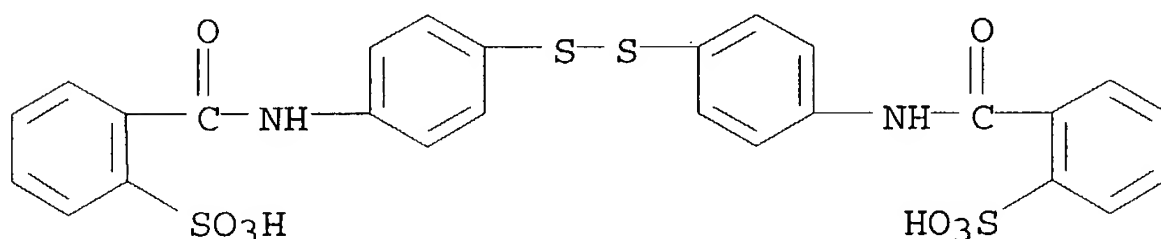
AB The material comprises .gtoreq.1 redn.-sensitized **Ag halide photog.** emulsion layer contg. R1X1X2R2 (R1-2 = alkyl, aryl, heterocycle, amino, R3C:O, R4OC:O, R3R5NC:O, R3C:NH, R4OC:NH, R3R5NC:NH, R3C:S, R4OC:S, R3R5NC:S; R3, R5 = H, alkyl, aryl, heterocycle; X1-2 = S, Se, Te; R1-2 and X1-2 may form ring) and an oxidizing agent to Ag. The material shows high sensitivity, low fog, and improved storage stability.

IT 38650-26-9 165116-10-9

(**silver halide photog.** material contg. oxidizing agent with improved storage stability)

RN 38650-26-9 HCA

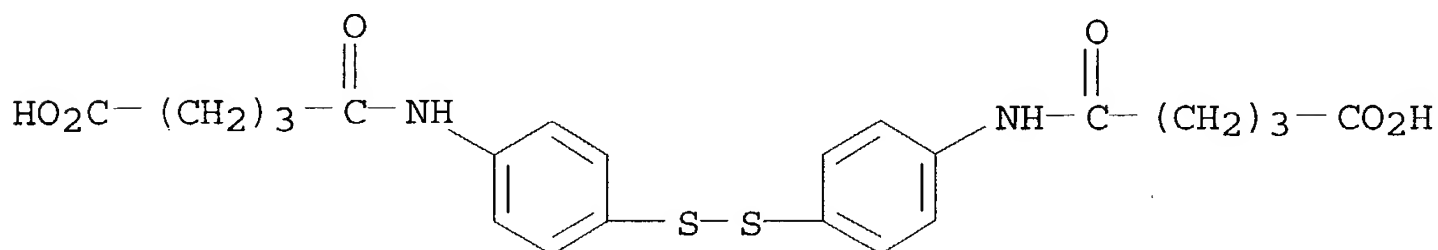
CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-phenyleneiminocarbonyl)]bis-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-10-9 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-06

ICS G03C001-00; G03C001-015; G03C001-08; G03C001-09; G03C001-34;

G03C007-00

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)

ST **silver halide photog** sulfur oxidizing
agent; selenium oxidizing agent **photog silver**
halide; tellurium oxidizing agent **photog**
silver halide

IT Oxidizing agents

Photographic emulsions

(**silver halide photog.** material

contg. oxidizing agent with improved storage stability)

IT 100-32-3 13431-03-3, Benzenethiosulfonic acid 16766-09-9
38650-26-9 165116-10-9

(**silver halide photog.** material

contg. oxidizing agent with improved storage stability)

L44 ANSWER 9 OF 22 HCA COPYRIGHT 2003 ACS

126:205418 Thermal processing type **silver halide**

photographic material containing a disulfide derivative.

Okada, Hisashi; Totani, Ichizo; Kojima, Tetsuo (Fuji Photo Film Co
Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 09005926 A2 19970110

Heisei, 38 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP

1996-85994 19960315. PRIORITY: JP 1995-115274 19950418.

AB Claimed **photog.** material contains a disulfide compd.

R1SSR2 (I; R1 = aryl, pyridyl, quinolyl; R2 = aryl, pyridyl,
quinolyl having substituent selected from aliph. hydrocarbon, aryl,
amino, alkoxy, aryloxy, acylamino, carbamoyl, sulfonylamino,
phosphonamido, sulfamoyl, alkylthio, arylthio, thiocarbonyl,
sulfonyl, sulfinyl, ureide, thioureide, thioamido, OH, mercapto,
sulfo, phosphono, hydroxamic acid residue, heterocyclic group).

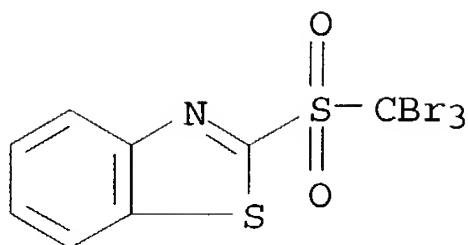
Also claimed is the **photog.** material contg., in addn. to
the compd. I, a polyhalomethane QYnC(X1)(X2)A (II; Q = aryl,
heterocyclic group; X1, X2 = halo; Y = C(LO), SO2, SO; A = H, halo,
electron-attracting group; n = 0, 1). It has low fog, and provides
an **image** with improved neutral color tone, and also has
the stability of both before and after processing. Suitable compd.
II are bis(2-benzoamidophenyl)disulfide, bis[4-
(phenylaminocarbonyl)phenyl]disulfide, bis[2-
(phenylsulfoamino)phenyl]disulfide, etc., and suitable compd. II are
benzothiazol-2-yl-sulfonyl-dibromomethane,
2-(tribromomethylsulfonyl)-5-methyl-thiadiazole, etc. The additives
are incorporated in the thermal processed type **photog.**
material comprising Ag behenate, preformed Ag(Br, I) crystals,
phthalazone, poly(vinyl butyral) binder, etc.

IT 31274-42-7

(for thermal processing type **silver halide**
photog. material)

RN 31274-42-7 HCA

CN Benzothiazole, 2-[(tribromomethyl)sulfonyl]- (8CI, 9CI) (CA INDEX
NAME)



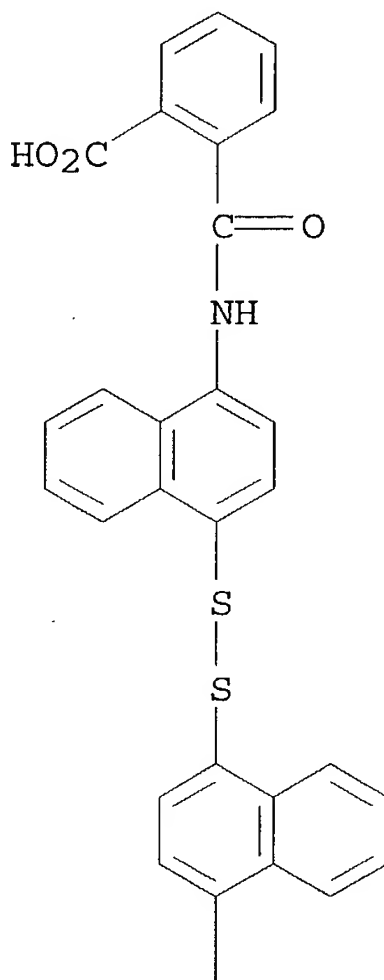
IT 187744-17-8

(thermal processing type **silver halide**
photog. material contg. disulfide deriv. to improve color
tone and reduce fog)

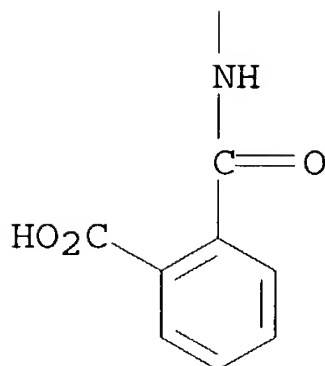
RN 187744-17-8 HCA

CN Benzoic acid, 2,2'-[dithiobis(4,1-naphthalenediyliminocarbonyl)]bis-
(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

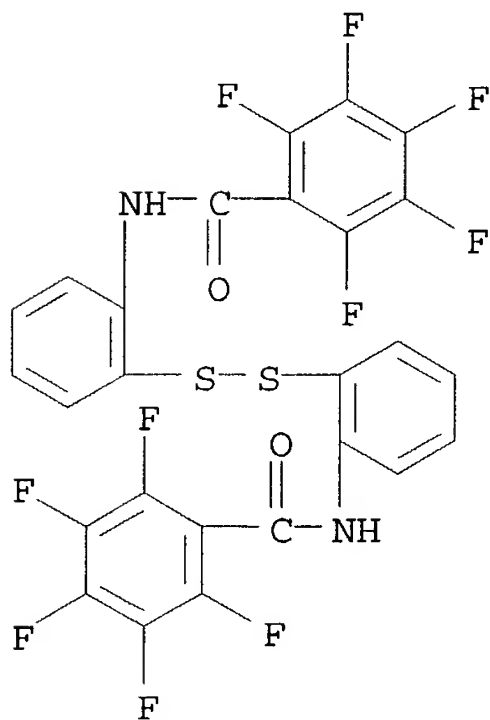


IT 69200-87-9P 187744-22-5P 187744-23-6P
187744-24-7P

(thermal processing type **silver halide**
photog. material contg. disulfide deriv. to improve color
tone and reduce fog)

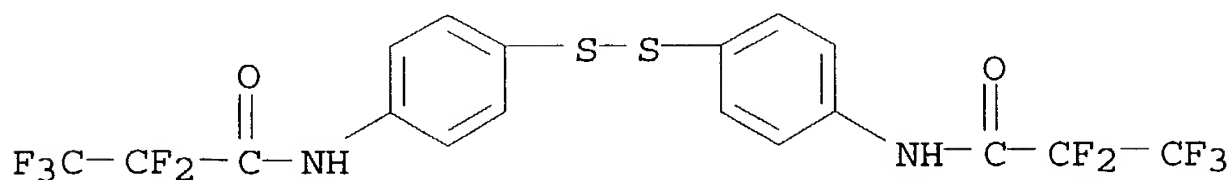
RN 69200-87-9 HCA

CN Benzamide, N,N'-(dithiodi-2,1-phenylene)bis[2,3,4,5,6-pentafluoro-
(9CI) (CA INDEX NAME)

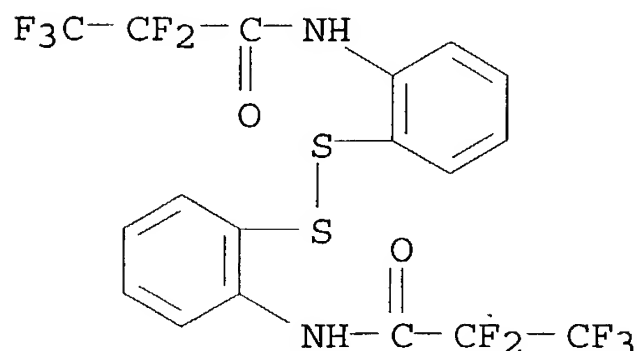


RN 187744-22-5 HCA

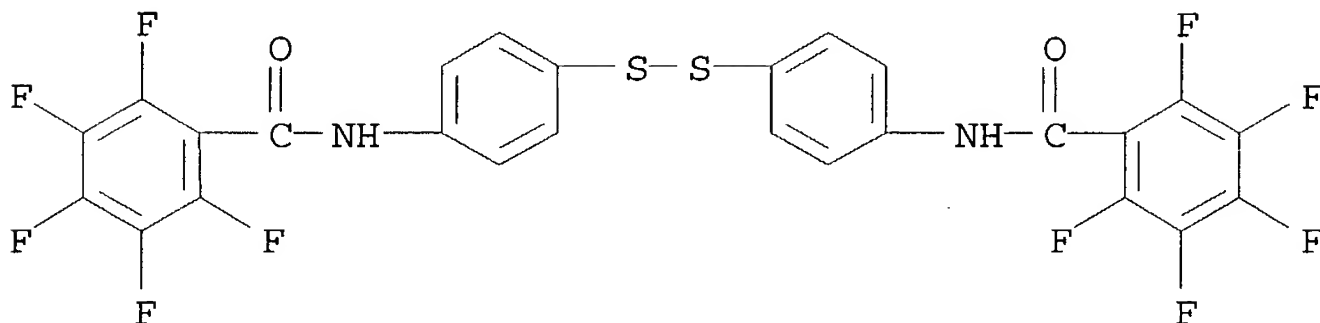
CN Propanamide, N,N'-(dithiodi-4,1-phenylene)bis[2,2,3,3,3-pentafluoro-
(9CI) (CA INDEX NAME)



RN 187744-23-6 HCA

CN Propanamide, N,N'-(dithiodi-2,1-phenylene)bis[2,2,3,3,3-pentafluoro-
(9CI) (CA INDEX NAME)

RN 187744-24-7 HCA

CN Benzamide, N,N'-(dithiodi-4,1-phenylene)bis[2,3,4,5,6-pentafluoro-
(9CI) (CA INDEX NAME)

IC ICM G03C001-498

ICS G03C001-498

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)ST thermal processing type **photog** material; disulfide deriv
additive **photog** material; aryl disulfide additive
photog material; pyridyl disulfide additive **photog**
material; polyhalomethane additive **photog** materialIT **Photographic** films

Photographic fog inhibitors

Photographic stabilizers

(thermal processing type **silver halide****photog.** material contg. disulfide deriv. to improve color
tone and reduce fog)IT 31183-89-8P, (2,2'-Diamino-5,5'-dichlorodiphenyl)disulfide
(disulfide compds. from; for thermal processing type
silver halide photog. material)IT 62-53-3, Aniline, reactions 75-36-5, Acetylchloride 85-46-1,
1-Naphthalenesulfonyl chloride 86-84-0, 1-Naphthylisocyanate
93-11-8, 2-Naphthalenesulfonyl chloride 95-24-9, 2-Amino-6-
chlorobenzothiazole 98-09-9, Benzenesulfonyl chloride
98-59-9, p-Toluenesulfonyl chloride 98-68-0, p-

Methoxybenzenesulfonyl chloride 98-88-4, Benzoyl chloride 103-71-9, Phenylisocyanate, reactions 119-80-2 121-44-8, reactions 356-42-3, Pentafluoropropionic anhydride 722-27-0, 4,4'-Dithiodianiline 773-64-8, 2-Mesitylenesulfonyl chloride 1141-88-4, 2,2'-Dithiodianiline 2243-83-6, 2-Naphthalenecarboxylic acid chloride 2251-50-5, Pentafluorobenzoyl chloride 2524-64-3, Diphenylchlorophosphate 2536-91-6, 2-Amino-6-methylbenzothiazole 7719-09-7, Thionyl chloride 15945-07-0, 2,4,5-Trichlorobenzenesulfonyl chloride (disulfide compds. from; for thermal processing type **silver halide photog.** material)

IT 31274-42-7
(for thermal processing type **silver halide photog.** material)

IT 160029-59-4
(thermal processing type **silver halide photog.** material contg. disulfide deriv. and halomethane deriv.)

IT 135-57-9 115484-15-6 **187744-17-8** 187744-19-0
187744-20-3 187744-21-4 187744-26-9 187744-28-1
(thermal processing type **silver halide photog.** material contg. disulfide deriv. to improve color tone and reduce fog)

IT 3982-42-1P 4104-52-3P 4490-97-5P 4508-09-2P 14897-91-7P
16766-10-2P 52017-43-3P **69200-87-9P** 187744-16-7P
187744-18-9P **187744-22-5P** **187744-23-6P**
187744-24-7P 187744-25-8P 187744-27-0P 187744-29-2P
187744-30-5P 187744-31-6P 187744-32-7P 187744-33-8P
(thermal processing type **silver halide photog.** material contg. disulfide deriv. to improve color tone and reduce fog)

L44 ANSWER 10 OF 22 HCA COPYRIGHT 2003 ACS

126:205389 **Silver halide photographic**

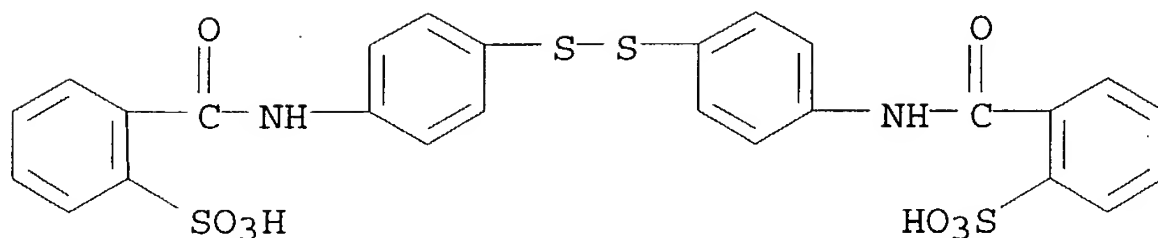
material with high sensitivity and reduced fog. Yamashita, Seiji (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 09015773 A2 19970117 Heisei, 21 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-165342 19950630.

AB In the title material including at least one **photog.** emulsion layer, the emulsion contains **Ag halide** grains 50-100 % of which are tabular grains with an aspect ratio of .gtoreq.2, contain .gtoreq.20 % **AgCl**, and have {100} surfaces. During the emulsion prep., an oxidn. agent is added.

IT **38650-26-9**
(oxidn. agent additive to **photog.** emulsion)

RN 38650-26-9 HCA

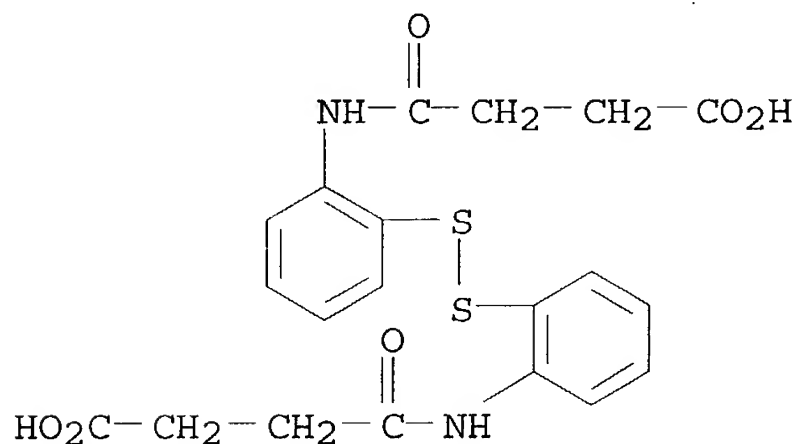
CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-phenyleneiminocarbonyl)]bis-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

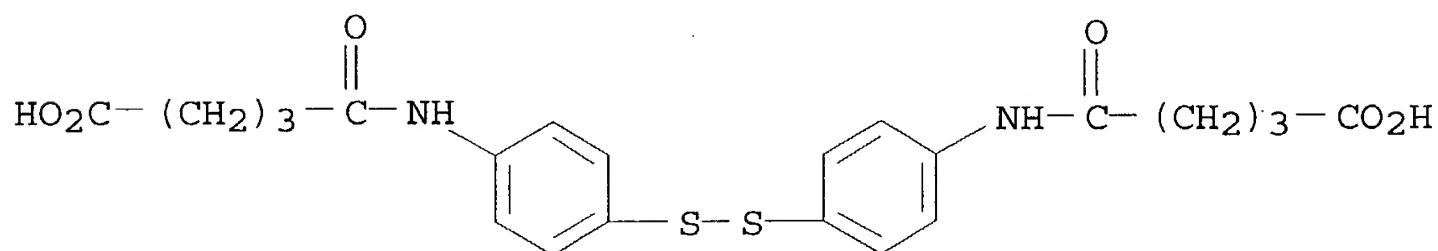
- IC ICM G03C001-035
ICS G03C001-035; G03C001-015; G03C001-06
- CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **silver halide photog** emulsion film
- IT **Photographic** emulsions
Photographic films
(**silver halide photog.** material with high sensitivity and reduced fog)
- IT 1077-28-7, 1,2-Dithiolane-3-pentanoic acid 7722-84-1, Hydrogenperoxide, uses 31999-88-9 **38650-26-9** (oxidn. agent additive to **photog.** emulsion)
- L44 ANSWER 11 OF 22 HCA COPYRIGHT 2003 ACS
125:208339 **Silver halide photographic** emulsion with localized phase containing cyanometal complex providing improved speed/fog ratio. Kaga, Makoto; Tanaka, Shigeo (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08171155 A2 19960702 Heisei, 33 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-314821 19941219.
- AB The **photog.** emulsion has the following characteristics; (1) the grains have **AgCl** content of .gtoreq.95 mol%, (2) they have localized microphases contg. .gtoreq.10 times higher concn. of cyano-metal complex than other parts of the grains, (3) the phases rich in cyano-metal complex are localized in the surface layer sharing outer 50% (vol.-wise) of the grain, (4) the crystn. to impregnate the cyano-metal complex is conducted at pH .gtoreq.7, and (5) the emulsion is addeds by a compd. selected from (a) a compd. contg. a structure comprising chain of .gtoreq.3 S, Se, or Te atoms, (b) a heterocyclic org. compd. contg. .gtoreq.2 S, Se, or Te atoms sepd. by other atom(s) from each other, (c) a compd. represented by the formula R11X11X12R12 (R11, R12 = atom group to form cyclic or non-cyclic mol.; X11, X12 = S, Se, Te) and (d) inorg. sulfur, thiosulfonate, R21SO2SM21 (R21 = aliph., arom., heterocyclic compd.; M21 = cation, H), or R31X31O2M31 (X31 = S, Se; M31 and R31 same as M21 and R21). The emulsion has high sensitivity and low fog, reduced failure from reciprocity law, and good prodn. consistency, and is particularly suitable for the application to **photog** . color paper.

IT 165116-09-6 165116-10-9
 (Ag halide photog. emulsion with
 localized phase contg. cyanometal complex for high speed/fog
 ratio)
 RN 165116-09-6 HCA
 CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo-,
 disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-10-9 HCA
 CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-,
 disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-015
 ICS G03C001-035; G03C001-07; G03C001-09; G03C001-10
 CC 74-2 (Radiation Chemistry, Photochemistry, and
 Photographic and Other Reprographic Processes)
 ST silver halide photog emulsion making;
 cyano metal complex photog emulsion; polythio compd
 additive photog emulsion; polyseleno compd additive
 photog emulsion; polytelluro compd additive photog
 emulsion

IT **Photographic emulsions**

(**Ag halide photog.** emulsion with localized phase contg. cyanometal complex for high speed/fog ratio)

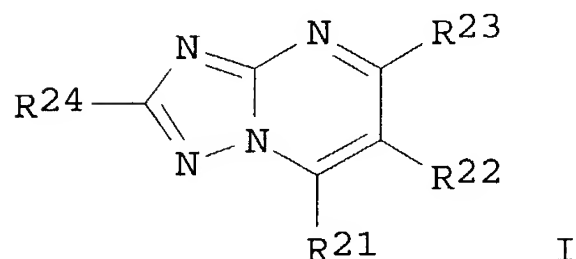
IT 62-46-4, 1,2-Dithiolane-3-pentanoic acid 103-34-4 722-27-0
824-79-3 930-35-8, 1,3-Dithiole-2-thione 971-15-3 7704-34-9,
Sulfur, uses 13943-58-3, Tetrapotassium hexacyanoferrate
14874-33-0, Tetrapotassium hexacyanorhenate 15002-31-0,
Tetrapotassium hexacyanoruthenate 16766-09-9 16920-56-2,
Dipotassium hexachloroiridate 28519-50-8 **165116-09-6**
165116-10-9 181018-64-4, Benzo[b]thiophene-2,3-dithione
(**Ag halide photog.** emulsion with localized phase contg. cyanometal complex for high speed/fog ratio)

L44 ANSWER 12 OF 22 HCA COPYRIGHT 2003 ACS

125:208304 **Silver halide photographic**

material having high sensitivity and excellent reciprocity failure characteristic. Kuroda, Koichiro; Tanaka, Shigeo; Ikeda, Takeshi; Nojima, Takahiko (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08171168 A2 19960702 Heisei, 66 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-312080 19941215.

GI



AB The title **Ag halide photog.** material

has .gtoreq.1 **Ag halide** emulsion layers which is made up of **Ag halide** emulsion consisting of .gtoreq.95 mol% of **AgCl** and a metal compd. The **photog.** material is chem. sensitized by Se or Te, and the **Ag halide** emulsion layer contains .gtoreq.1 compd. selected from: (1) (X11)_nQ11(SY11)_m {X11 = hydrophilic group; Q11 = org. (m + n) valent group; Y11 = H, amidino, at. group forming monovalent cation; m, n = 1, 2}; (2) I (R21-24 = H, alkyl, amino, hydroxy, alkoxy, heterocyclyl, and the like; R21 or R23 is OH); and (3) R31X31X32R32 (X31,32 = S, Se, Te; R33,32 = at. group forming independently cyclic or heterocyclic group or together with X33 and X32), R41SO2SM41 (R41 = aliph., arom., heterocyclyl; M41 = H, monovalent cation), or R51X51O2M51 (X51 = S, Se; R51 = aliph., arom., heterocyclyl; M51 = H, monovalent cation).

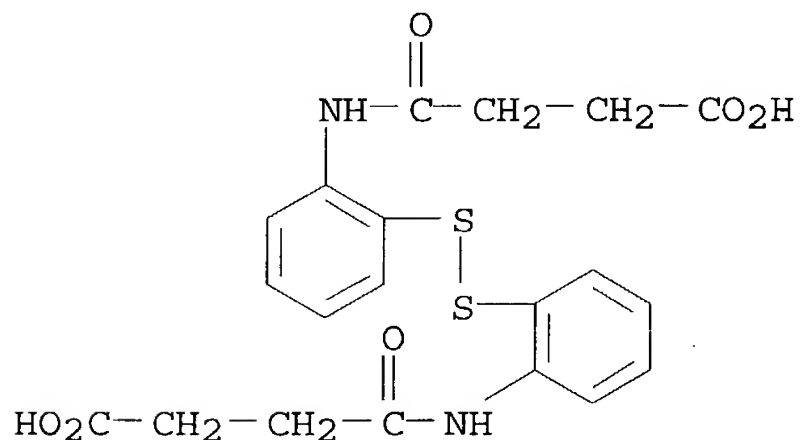
IT **165116-09-6 165116-10-9**

(**silver halide photog.** material

having high sensitivity and excellent reciprocity failure characteristic)

RN 165116-09-6 HCA

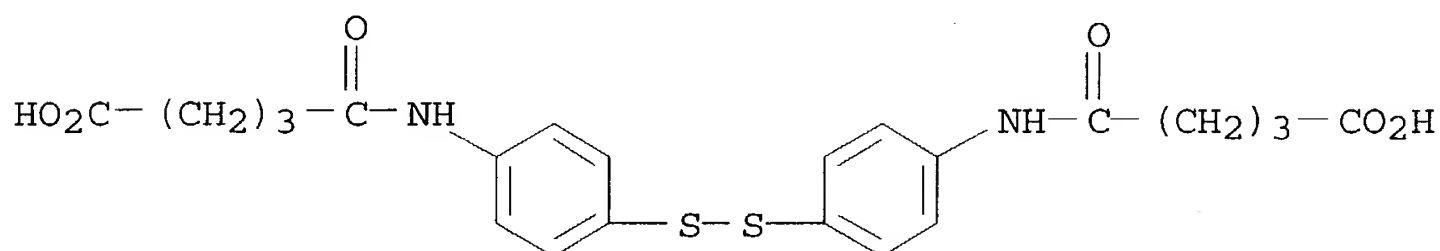
CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-10-9 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-09

ICS G03C001-035; G03C001-07; G03C001-10; G03C001-34; G03C007-392

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST selenium sensitized **silver halide photog** material; sulfur sensitized **silver halide photog** material; tellurium sensitized **silver halide photog** material; chem sensitizer **silver halide photog** material

IT Photographic emulsions

Photographic sensitizers

(**silver halide photog.** material
having high sensitivity and excellent reciprocity failure
characteristic)

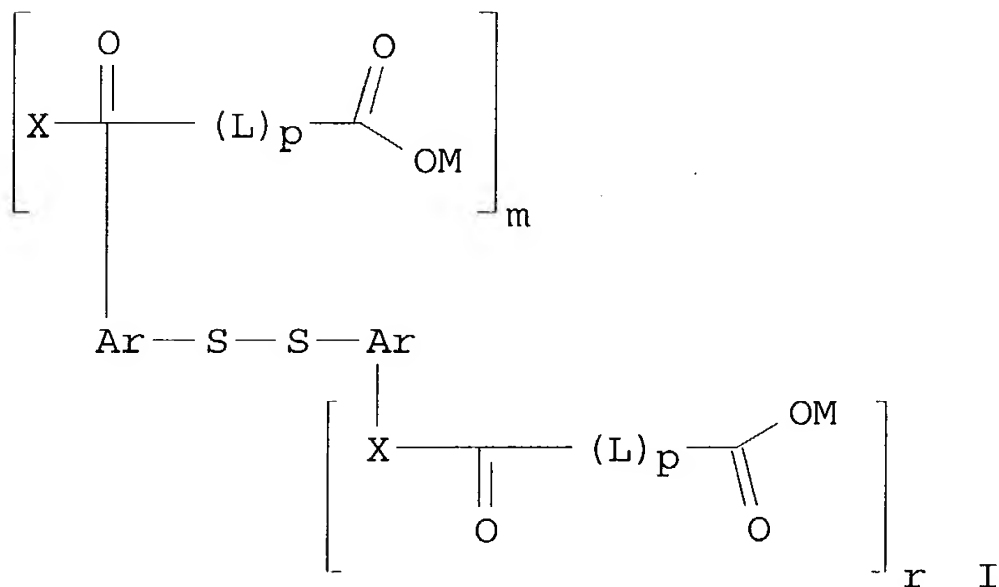
IT 62-46-4, 1,2-Dithiolane-3-pentanoic acid 971-15-3 2503-56-2
13943-58-3, Tetrapotassium hexacyanoferrate 16766-09-9
16920-56-2, Dipotassium hexachloroiridate 19121-78-9, Dipotassium
hexabromoiridate 22615-69-6 23249-95-8 42546-07-6
53918-03-9, Sodium 2-mercaptobenzimidazole-5-sulfonate 99131-44-9
121607-15-6 146419-35-4 **165116-09-6 165116-10-9**
181018-63-3 181018-64-4, Benzo[b]thiophene-2,3-dithione

(**silver halide photog.** material
having high sensitivity and excellent reciprocity failure
characteristic)

L44 ANSWER 13 OF 22 HCA COPYRIGHT 2003 ACS

123:183318 Water-soluble disulfides in **silver halide**
emulsions. Budz, Jerzy A.; Burgmaier, George J.; Klaus, Roger L.;
Wen, Xin (Eastman Kodak Company, USA). U.S. US 5418127 A 19950523,
13 pp. Cont.-in-part of U.S. Ser. No. 68,814, abandoned. (English).
CODEN: USXXAM. APPLICATION: US 1994-210826 19940318. PRIORITY: US
1993-68814 19930528.

GI



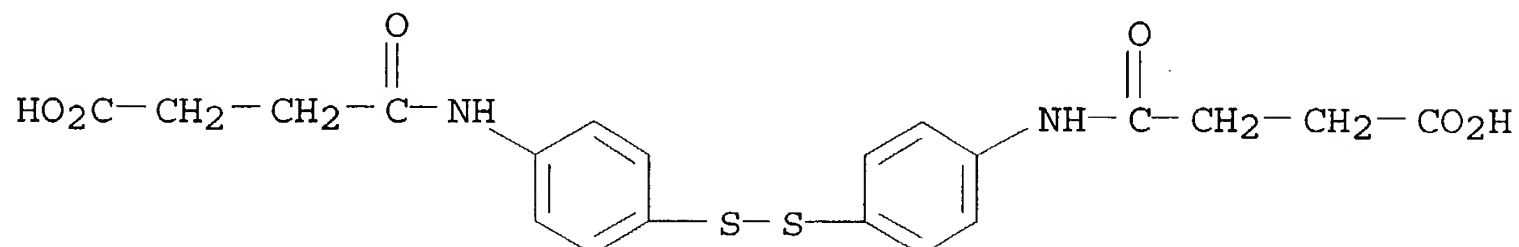
AB A disulfide compd. represented by the following formula I [X = O, NH or NR, where R is a substituent; m and r are independently 0, 1 or 2; M is H or a cationic species; Ar is an arom. group; and L is a linking group, where p is 0 or 1]. A **Ag halide** emulsion comprising the disulfide compds. and a **photog.** element comprising a **Ag halide** emulsion in reactive assocn. with the disulfide compds. and a method of making same are also described. The disulfide compds. are water-sol., have good antifogging properties, and have min. impact on sensitivity.

IT **165116-08-5 165116-09-6 165116-10-9**

165116-11-0

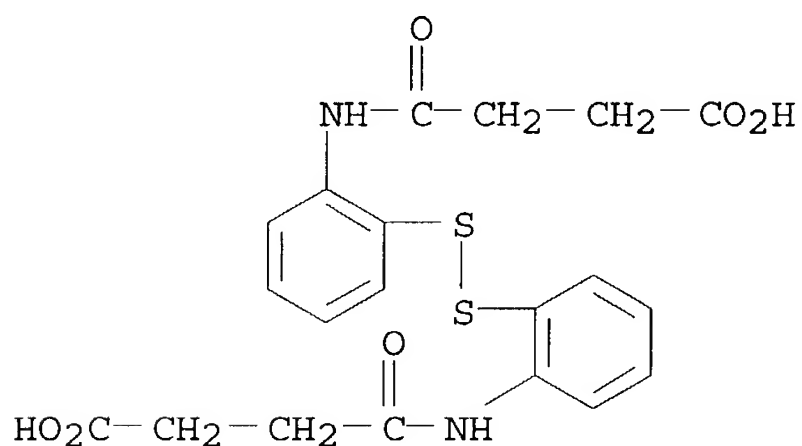
(water-sol.; **photog.** fog inhibitor)

RN 165116-08-5 HCA

CN Butanoic acid, 4,4'-[dithiobis(4,1-phenyleneimino)]bis[4-oxo-,
disodium salt (9CI) (CA INDEX NAME)

● 2 Na

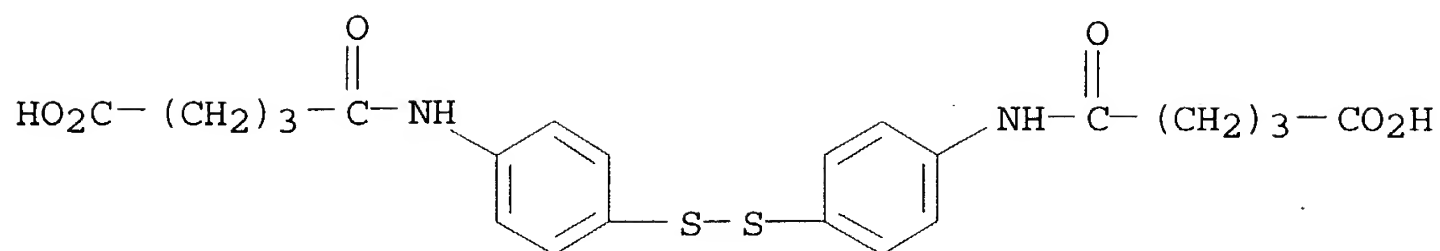
RN 165116-09-6 HCA

CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo-,
disodium salt (9CI) (CA INDEX NAME)

● 2 Na

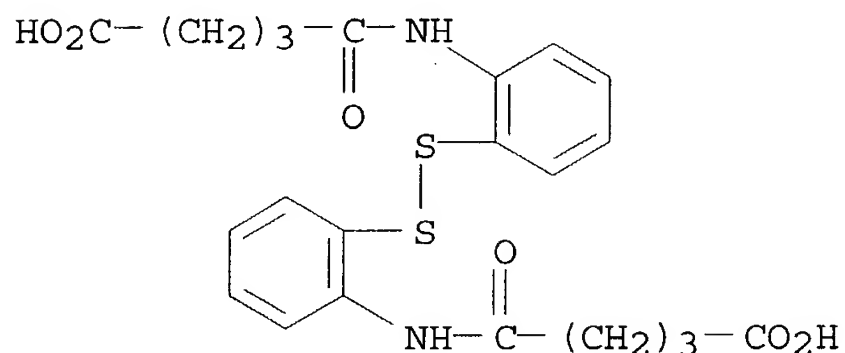
RN 165116-10-9 HCA

CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-,
disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-11-0 HCA

CN Pentanoic acid, 5,5'-[dithiobis(2,1-phenyleneimino)]bis[5-oxo-,
disodium salt (9CI) (CA INDEX NAME)

● 2 Na

IC ICM G03C001-34

ICS G03C001-09

NCL 430611000

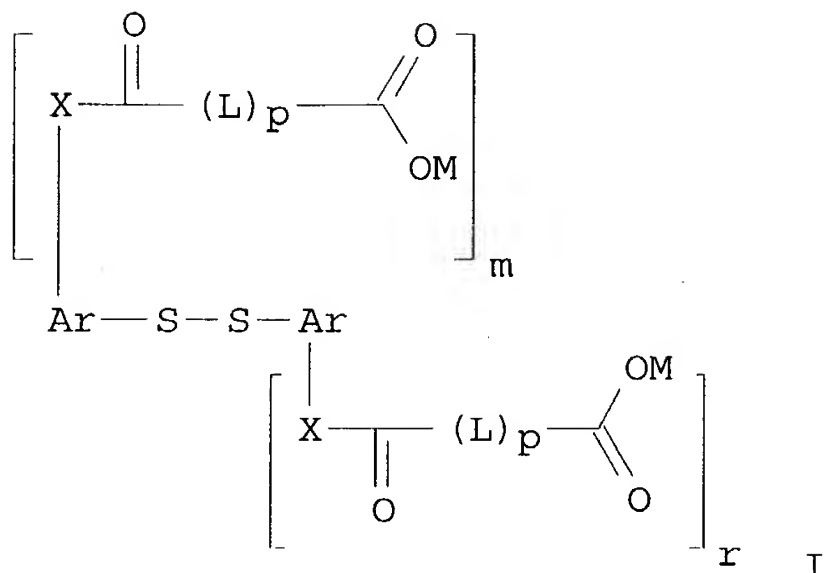
CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
Section cross-reference(s): 23ST water sol disulfide **photog** emulsion; fog inhibitor
disulfideIT **Photographic** fog inhibitors
(Water-sol. disulfides)IT 165116-07-4 165116-08-5 165116-09-6
165116-10-9 165116-11-0(water-sol.; **photog.** fog inhibitor)

L44 ANSWER 14 OF 22 HCA COPYRIGHT 2003 ACS

123:70176 Water-soluble disulfides in **silver halide**emulsions.. Budz, Jerzy Antoni; Burgmaier, George John; Laus, Roger
Lee; Wen, Xin (Eastman Kodak Co., USA). Eur. Pat. Appl. EP 627657
A2 19941207, 26 pp. DESIGNATED STATES: R: BE, CH, DE, FR, GB, IT,

LI, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1994-201441
 19940521. PRIORITY: US 1993-68814 19930528; US 1994-210826
 19940318.

GI



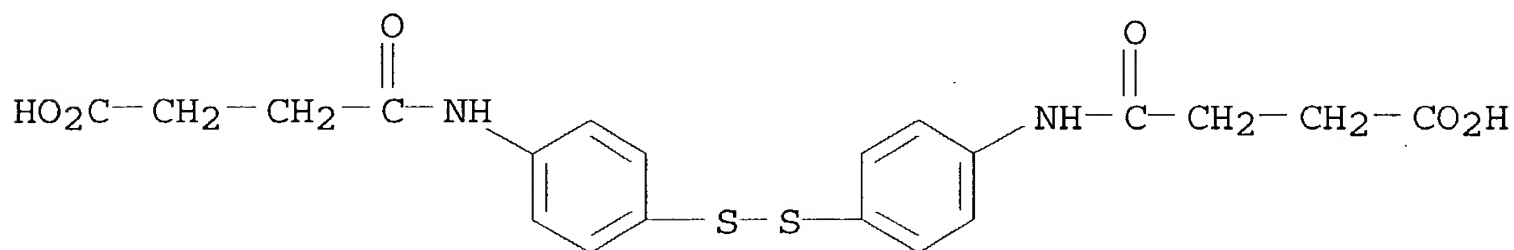
AB A disulfide compd. is described represented by the following formula
 I [X is independently -O-, -NH- or -NR-, where R is a substituent; m
 and r are independently 0, 1 or 2 provided that $m + r \geq 1$;
 M is -H or a cationic species; Ar is an arom. group; and L is a
 linking group, where p is 0 or 1]. A **Ag halide**
 emulsion comprising the disulfide compds. do not need volatile org.
 solvents and circumvents the disadvantage of using solid particle
 dispersions.

IT 165116-08-5 165116-09-6 165116-10-9
 165116-11-0

(water-sol. disulfides as **photog.** fog inhibitors)

RN 165116-08-5 HCA

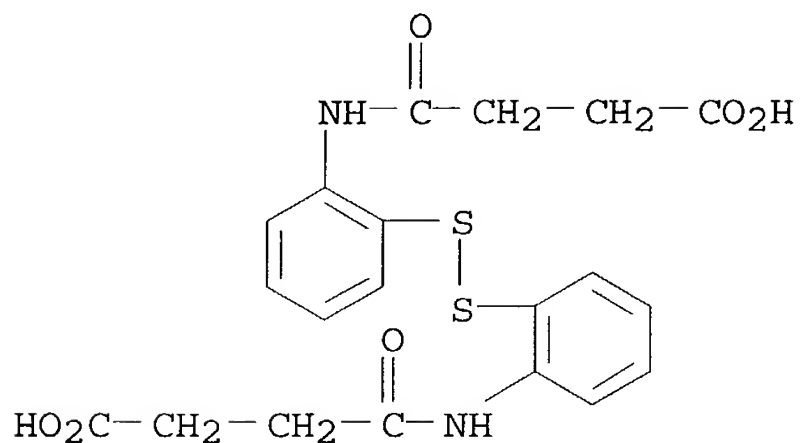
CN Butanoic acid, 4,4'-[dithiobis(4,1-phenyleneimino)]bis[4-oxo-,
 disodium salt (9CI) (CA INDEX NAME)



● 2 Na

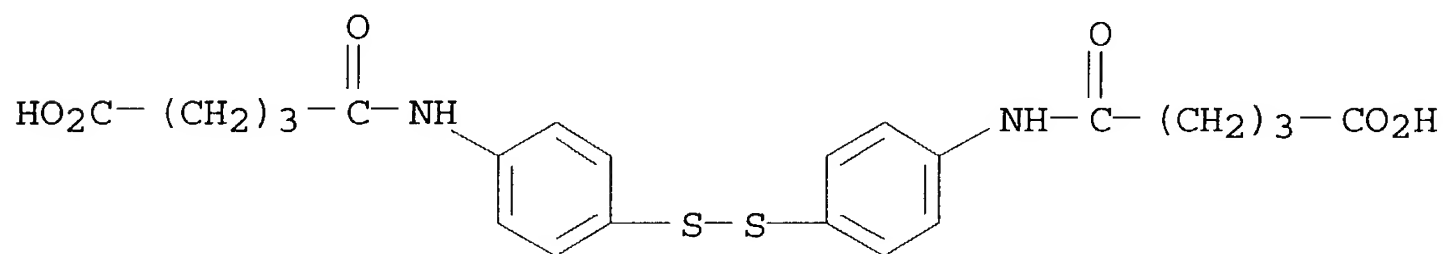
RN 165116-09-6 HCA

CN Butanoic acid, 4,4'-[dithiobis(2,1-phenyleneimino)]bis[4-oxo-,
disodium salt (9CI) (CA INDEX NAME)



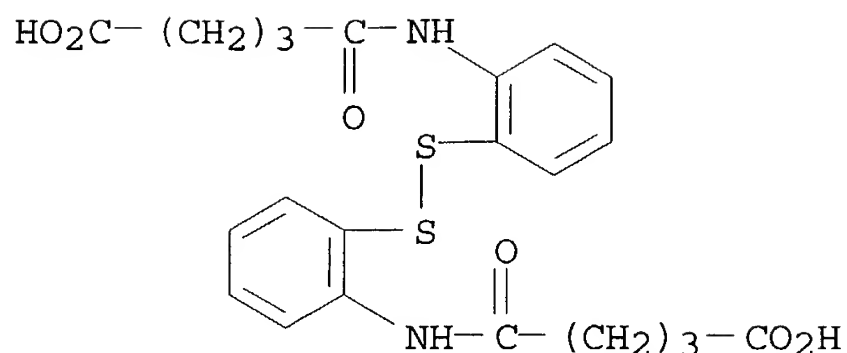
● 2 Na

RN 165116-10-9 HCA
CN Pentanoic acid, 5,5'-[dithiobis(4,1-phenyleneimino)]bis[5-oxo-,
disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 165116-11-0 HCA
CN Pentanoic acid, 5,5'-[dithiobis(2,1-phenyleneimino)]bis[5-oxo-,
disodium salt (9CI) (CA INDEX NAME)



● 2 Na

IC ICM G03C001-34
ICS C07C323-20; C07C323-41; C07D213-75
CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
ST water sol sulfide **photog** emulsion; fog inhibitor
photog water sol
IT **Photographic** fog inhibitors
(water-sol. disulfides)
IT Disulfides
(water-sol. disulfides as **photog.** fog inhibitors)
IT **Photographic** emulsions
(water-sol. disulfides in **silver halide**
emulsions.)
IT 165116-06-3 165116-07-4 165116-08-5 165116-09-6
165116-10-9 165116-11-0
(water-sol. disulfides as **photog.** fog inhibitors)

L44 ANSWER 15 OF 22 HCA COPYRIGHT 2003 ACS
122:302893 **Silver halide photographic**
material and **image** formation. Nagashima, Toshiharu; Arai,
Takeo (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP
06313934 A2 19941108 Heisei, 24 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1993-102712 19930428.

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title **photog.** material, having .gtoreq.1
gelatin-contg. **Ag halide** emulsion layer on 1
side of a support, contains a tetrazonium compd. I [R1, R2 = H,
(substituted) alkyl, aryl, allyl, aralkyl, carbonyl, alkoxy,
allyloxy, heterocycle; A = linking group with (m + 2) valences which
is not .pi.-electron-conjugated with the .pi.-electron system of the

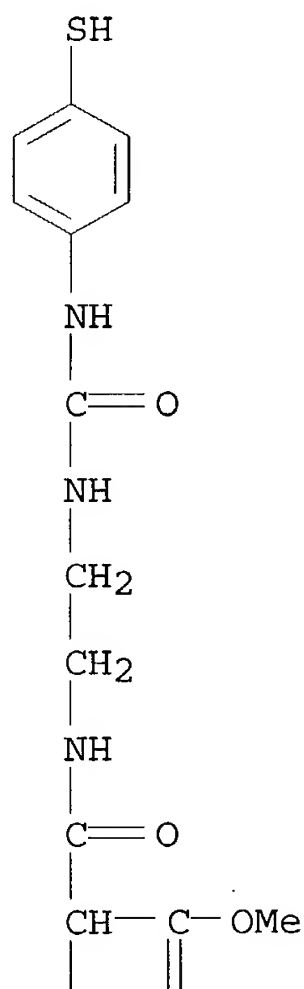
tetrazonium cation; SOL1, SOL2 = mono- or divalent hydrophilic group; m = 0-3; n = 0, 1, m .noteq. n .noteq. 0; DEC = divalent linking group which cleaves in alk. developing solns.; B = linking group with (p + q + 1) valences; HARD = functional group capable of reacting with gelatin to combine; q = 0-3; ABS = functional group capable of adsorbing to **Ag halide** grains; p = 0-3; X- = inorg. or org. cation] in .gtoreq.1 of the hydrophilic layers including the emulsion layer on the same side of the support. The material is developed with Ag **image**-forming developer with pH .gtoreq.10. A **photog.** film using a **Ag halide** emulsion contg. II gave high contrast **images** with low formazan dye residual color, formazan scum stain, and uneven development.

IT 162549-95-3
(**silver halide photog.** film contg.
tetrazonium compd.)

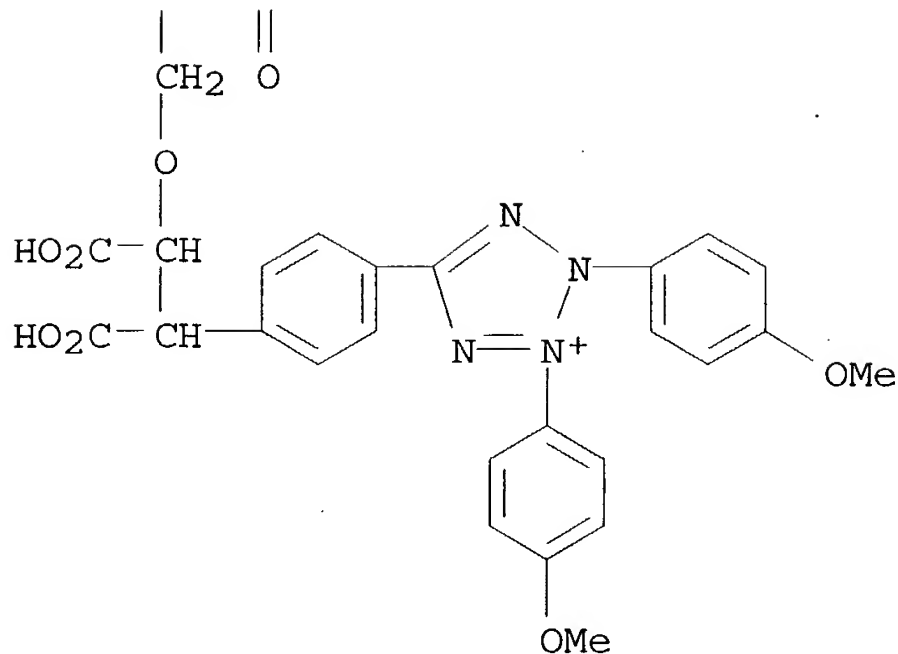
RN 162549-95-3 HCA

CN 2H-Tetrazolium, 5-[4-[1,2-dicarboxy-2-[2-[[[2-[[[(4-mercaptophenyl)amino]carbonyl]amino]ethyl]amino]carbonyl]-3-methoxy-3-oxopropoxy]ethyl]phenyl]-2,3-bis(4-methoxyphenyl)-, chloride (9CI)
(CA INDEX NAME)

PAGE 1-A



PAGE 2-A

● Cl⁻

- IC ICM G03C001-06
ICS G03C005-29
- CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST tetrazonium salt **silver halide photog**;
formazan dye residual color **photog**
- IT **Photographic** films
(**silver halide photog.** film contg. tetrazonium compd.)
- IT 162549-83-9 162549-85-1 162549-86-2 162549-87-3 162549-88-4
162549-89-5 162549-90-8 162549-91-9 162549-92-0 162549-93-1
162549-94-2 **162549-95-3** 162549-96-4 162549-97-5
162549-98-6 162549-99-7 162550-00-7 162550-01-8 162550-02-9
(**silver halide photog.** film contg. tetrazonium compd.)
- L44 ANSWER 16 OF 22 HCA COPYRIGHT 2003 ACS
119:237866 **Silver halide photographic**
photosensitive material containing diffusion-resistant dye. Kagawa, Nobuaki; Kawashima, Yasuhiko; Usagawa, Yasushi; Hirabayashi, Shigeto (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 05011409 A2 19930122 Heisei, 28 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1991-189486 19910704.
- AB The title material contains in .gtoreq.1 layer(s) of hydrophilic protective colloidal layers coated on a support .gtoreq.1 Ag salt of methine dyes (Dye)₁₁[-(L)₁₂-Sal]₁₃ (Dye = a methine dye structure; L

= divalent connective group using atom or at. group selected from C, N, O, and S as skeleton; Sal = group which forms sparingly sol. salt with Ag ion; l1 = 1, 2; l2 = 0, 1; l3 = 1, 2, 3, 4). The dye can be selected with good absorption spectral characteristics, is diffusion resistant and has superior leaching and bleaching characteristics, and shows no ill effects on **photog.** characteristics such as fog, desensitization, etc., and no residual color staining even under rapid processing.

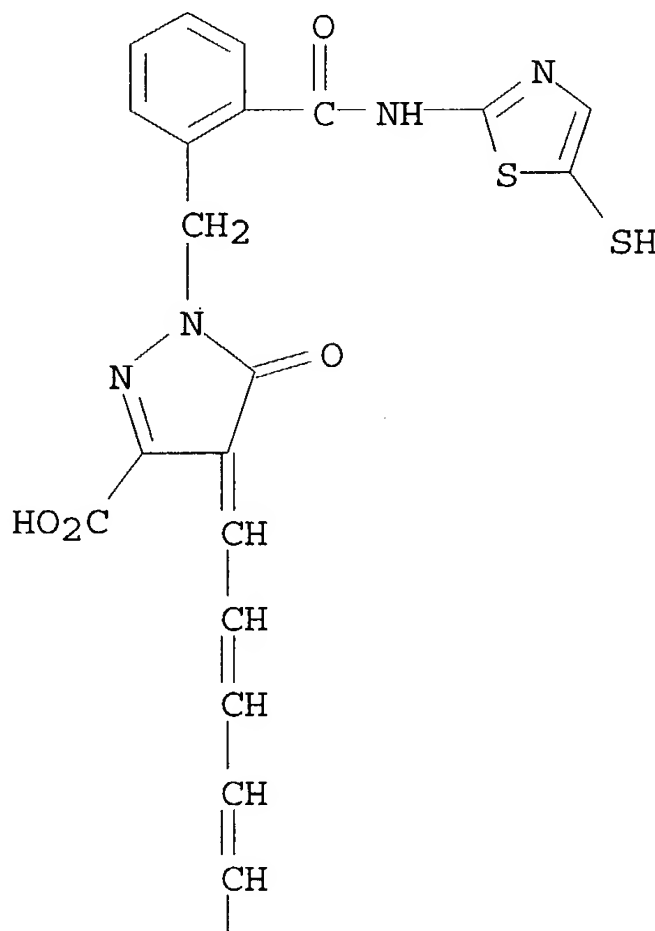
IT 151090-15-2D, silver salt

(**photog.** material with hydrophilic protective colloidal layer contg.)

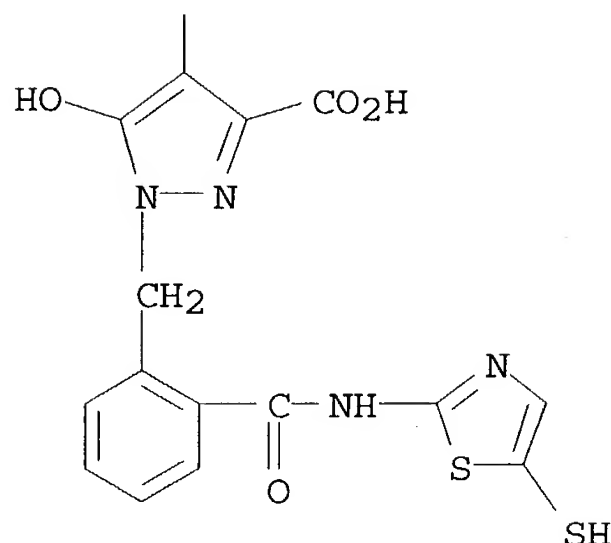
RN 151090-15-2 HCA

CN 1H-Pyrazole-3-carboxylic acid, 4-[5-[3-carboxy-5-hydroxy-1-[[2-[(5-mercapto-2-thiazolyl)amino]carbonyl]phenyl]methyl]-1H-pyrazol-4-yl]-2,4-pentadienylidene]-4,5-dihydro-1-[[2-[(5-mercapto-2-thiazolyl)amino]carbonyl]phenyl]methyl]-5-oxo- (9CI) (CA INDEX NAME)

PAGE 1-A



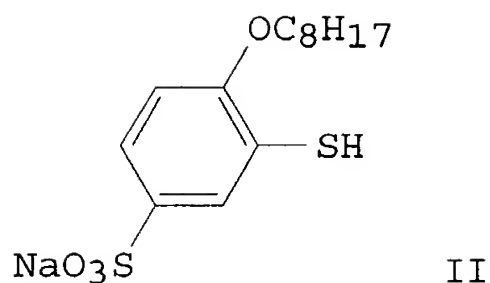
PAGE 2-A



IC ICM G03C001-83
 CC **74-2** (Radiation Chemistry, Photochemistry, and
 Photographic and Other Reprographic Processes)
 ST diffusion resistant dye **photog** material
 IT **Photographic** films
 (diffusion-resistant dyes for)
 IT 147641-66-5D, silver salt 147641-67-6D, silver salt
 147641-68-7D, silver salt 151067-89-9D, silver salt
 151090-08-3D, silver salt 151090-09-4D, silver salt
 151090-10-7D, silver salt 151090-11-8D, silver salt
 151090-12-9D, silver salt 151090-13-0D, silver salt
 151090-14-1D, silver salt **151090-15-2D**, silver salt
 151090-16-3D, silver salt 151090-17-4D, silver salt
 151090-18-5D, silver salt 151090-19-6D, silver salt
 151090-20-9D, silver salt 151090-21-0D, silver salt
 151090-22-1D, silver salt 151090-23-2D, silver salt
 (**photog.** material with hydrophilic protective colloidal
 layer contg.)

L44 ANSWER 17 OF 22 HCA COPYRIGHT 2003 ACS
 116:48968 Heat-developable **photographic** material. Hirai,
 Hiroyuki; Yabuki, Yoshiharu (Fuji Photo Film Co., Ltd., Japan).
 Jpn. Kokai Tokkyo Koho JP 03071131 A2 19910326 Heisei, 30 pp.
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-207511 19890810.

GI

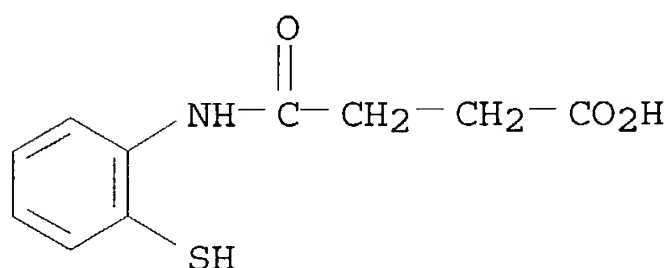


AB The title material comprises photosensitive **Ag halides**, a reducing agent, a binder, and RSM (I) [R = alkyl, alkenyl, aryl, etc., which has at least one SO₃H or CO₂H (or a salt thereof) as a substituent; M = H, alkali metal, ammonium]. Benzenesulfonic acid salt II is an example of I. The title material shows high sensitivity.

IT **138502-98-4**
(heat-developable **photog.** materials contg.)

RN 138502-98-4 HCA

CN Butanoic acid, 4-[(2-mercaptophenyl)amino]-4-oxo- (9CI) (CA INDEX NAME)



IC ICM G03C008-40

CC **74-7** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST heat developable **photog** material; thiol heat developable **photog** material

IT 138502-94-0 138502-95-1 138502-96-2 138502-97-3
138502-98-4 138502-99-5 138503-00-1
(heat-developable **photog.** materials contg.)

L44 ANSWER 18 OF 22 HCA COPYRIGHT 2003 ACS

114:52831 **Photographic** material containing compound comprising sensitizing dye and antifoggant functional groups. Saitou, Mitsuo; Ukai, Toshinao; Ikeda, Tadashi (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 372573 A2 **19900613**, 49 pp. DESIGNATED STATES: R: DE, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1989-122697 19891208. PRIORITY: JP 1988-311518 19881209; JP 1989-144724 19890607.

AB A **Ag halide photog.** material which has improved photosensitivity comprises, on a support, an emulsion layer comprising a dispersion medium, **Ag halide**

grains, and a pendant-type compd. comprising sensitizing dye and antifoggant functional groups which are directly bonded via substituent groups or bonded via a divalent linking group. The substituent groups are selected from the group consisting of OH, halogens, CN, carboxy, methylenedioxy, and alkyl, aryl, alkoxy, aryloxy, alkylthio, arylthio, acyl, and alkoxycarbonyl groups. The linking group comprises .ltoreq.20 C atoms and is selected from the group consisting of alkylene, arylene, alkenylene, SO₂, SO, O, S, CO, and NR (R = H, alkyl, or aryl).

IT 131579-92-5 131579-93-6 131579-94-7
131579-96-9 131602-51-2

(**photog.** sensitizer, with antifoggant function groups)

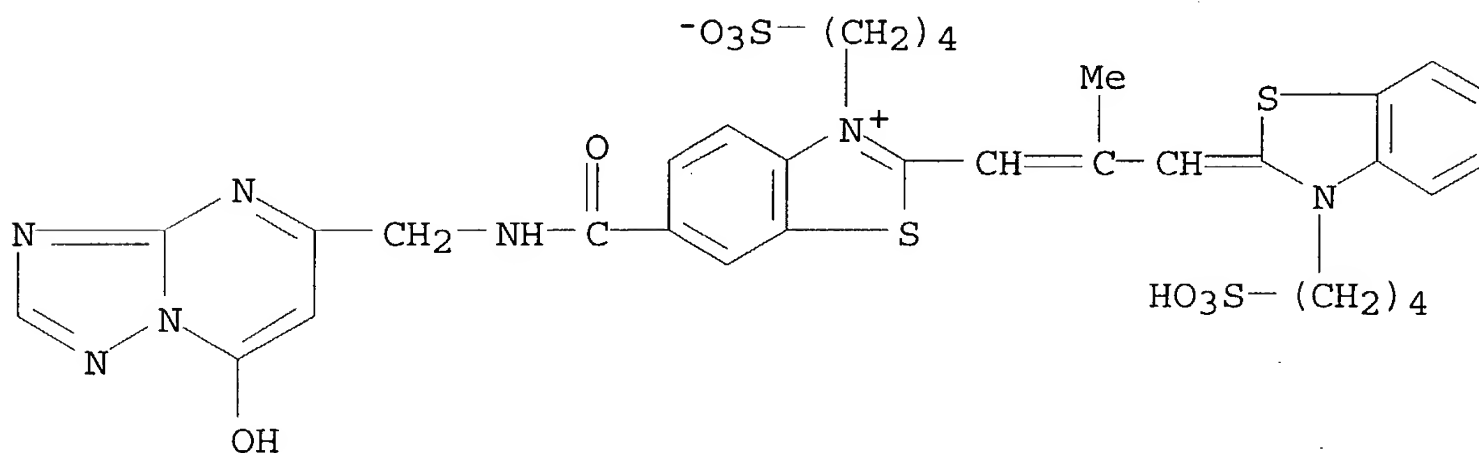
RN 131579-92-5 HCA

CN Benzothiazolium, 6-[[[(7-hydroxy[1,2,4]triazolo[1,5-a]pyrimidin-5-yl)methyl]amino]carbonyl]-2-[2-methyl-3-[3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-1-propenyl]-3-(4-sulfobutyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 131579-91-4

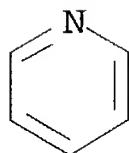
CMF C33 H35 N7 O8 S4



CM 2

CRN 110-86-1

CMF C5 H5 N

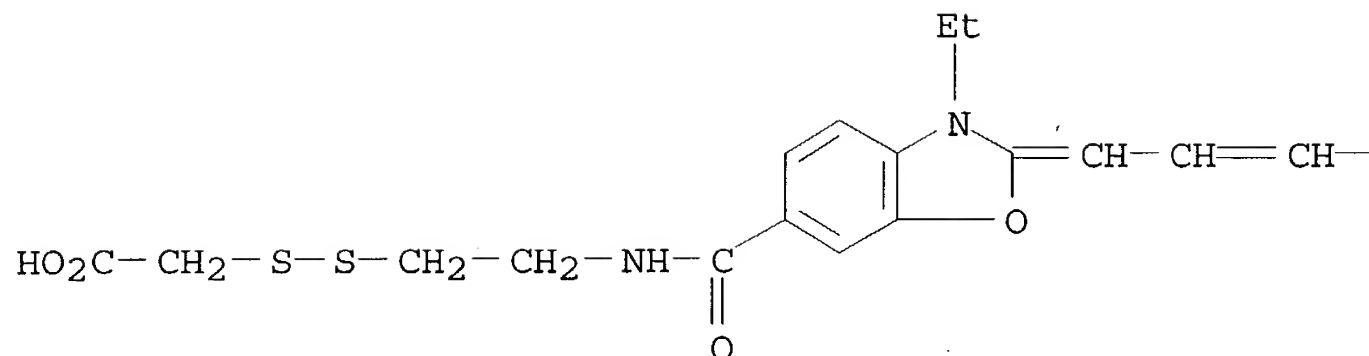


RN 131579-93-6 HCA

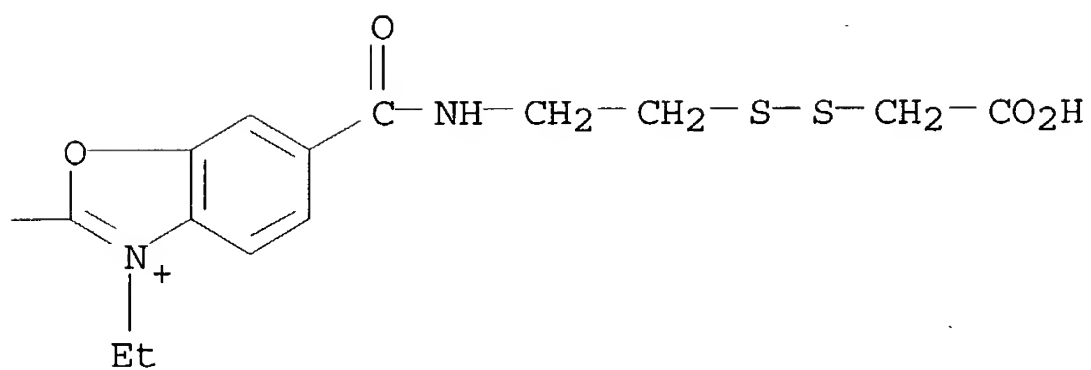
CN Benzoxazolium, 6-[[[2-[(carboxymethyl)dithio]ethyl]amino]carbonyl]-2-[3-[6-[[[2-[(carboxymethyl)dithio]ethyl]amino]carbonyl]-3-ethyl-2(3H)-benzoxazolylidene]-1-propenyl]-3-ethyl-, chloride (9CI) (CA

INDEX NAME)

PAGE 1-A

● Cl⁻

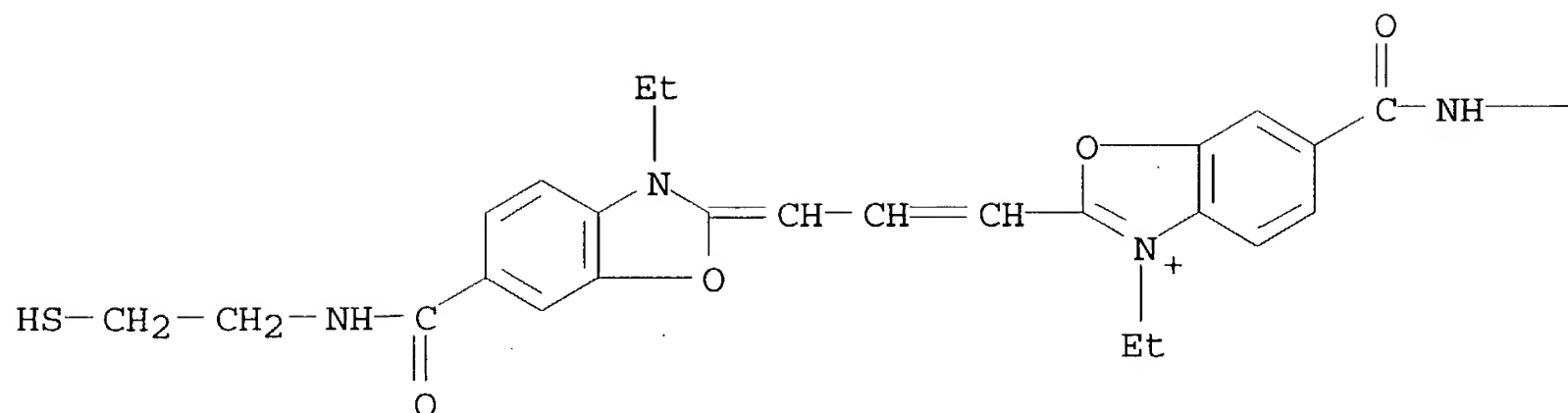
PAGE 1-B



RN 131579-94-7 HCA

CN Benzoxazolium, 3-ethyl-2-[3-[3-ethyl-6-[[(2-mercaptoethyl)amino]carbonyl]-2(3H)-benzoxazolyli-
dene]-1-propenyl]-6-[[(2-mercaptoethyl)amino]carbonyl]-, chloride (9CI) (CA INDEX NAME)

PAGE 1-A

● Cl⁻

PAGE 1-B

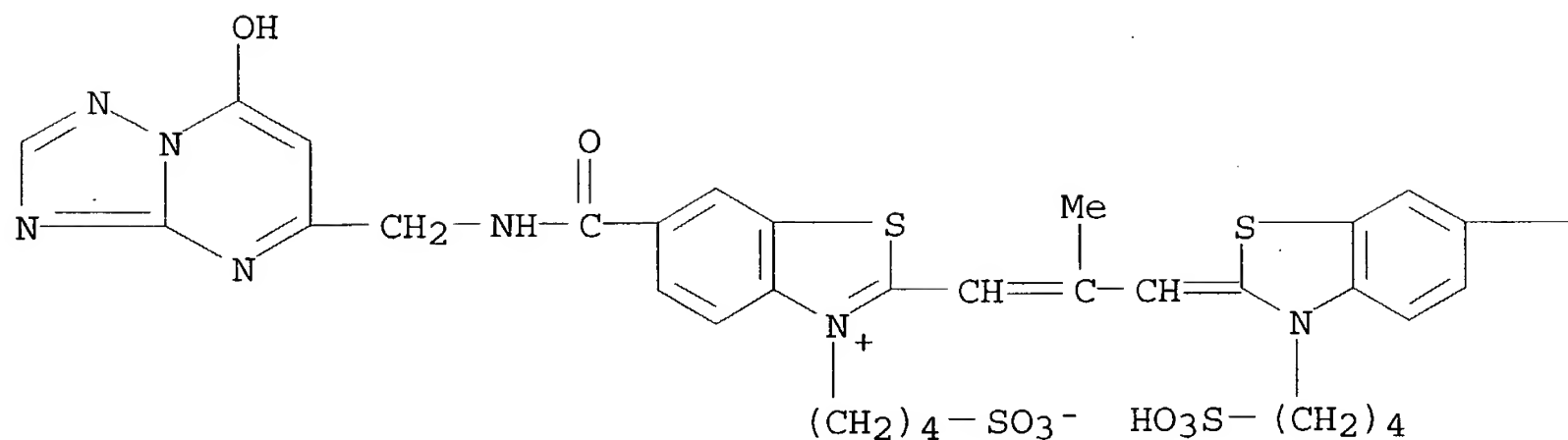
—CH₂—CH₂—SH

RN 131579-96-9 HCA
 CN Benzothiazolium, 6-[[[(7-hydroxy[1,2,4]triazolo[1,5-a]pyrimidin-5-yl)methyl]amino]carbonyl]-2-[3-[6-[[[(7-hydroxy[1,2,4]triazolo[1,5-a]pyrimidin-5-yl)methyl]amino]carbonyl]-3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-2-methyl-1-propenyl]-3-(4-sulfobutyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

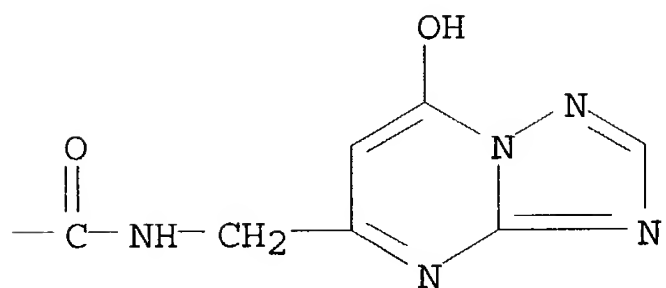
CM 1

CRN 131579-95-8
 CMF C40 H40 N12 O10 S4

PAGE 1-A



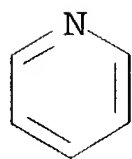
PAGE 1-B



CM 2

CRN 110-86-1

CMF C5 H5 N

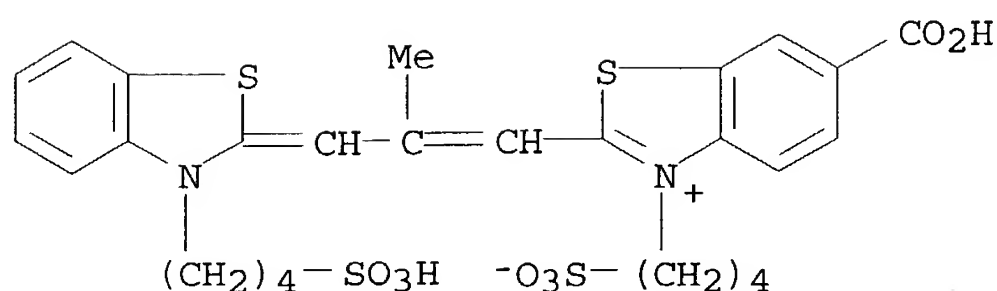


RN 131602-51-2 HCA
 CN Benzothiazolium, 6-carboxy-2-[2-methyl-3-[3-(4-sulfobutyl)-2(3H)-benzothiazolylidene]-1-propenyl]-3-(4-sulfobutyl)-, inner salt, compd. with pyridine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 131602-50-1

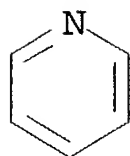
CMF C27 H30 N2 O8 S4



CM 2

CRN 110-86-1

CMF C5 H5 N



IC ICM G03C001-34

ICS G03C001-12

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)ST sensitizer antifoggant pendant compd **photog**IT **Photographic** sensitizers

(contg. antifoggant functional groups)

IT 131579-92-5 131579-93-6 131579-94-7

131579-96-9 131602-51-2

(photog. sensitizer, with antifoggant function groups)

L44 ANSWER 19 OF 22 HCA COPYRIGHT 2003 ACS

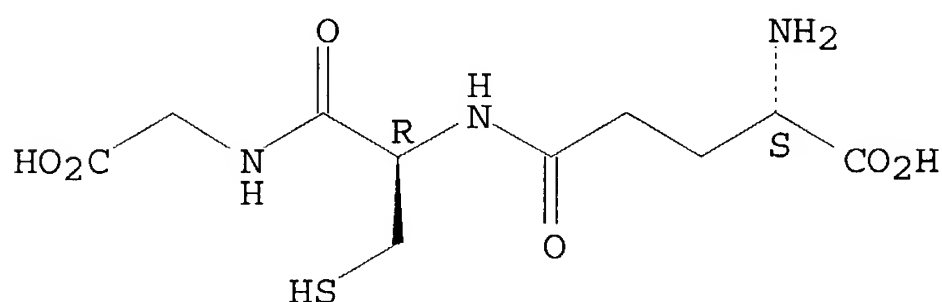
112:188791 The oxidation of gelatin. Moll, F. J. (Agfa-Gevaert A.-G.,
Leverkusen, D-5090, Fed. Rep. Ger.). Photogr. Gelatin, Proc. IAG
Conf., 5th, Meeting Date 1988, Volume 2, 281-91. Editor(s):
Ammann-Brass, Hans; Pouradier, Jacques. Int. Arbeitsgem.
Photogelatine: Fribourg, Switz. (English) 1989. CODEN: 56TEAA.

AB The oxidn. of gelatins is a highly complex process. Depending on
the pH and the oxidizing agent, a variety of impurities present in
the gelatin and different parts of the gelatin mol. can be oxidized.
Relatively easily proceeds the oxidn. of inorg. impurities such as
sulfite, nitrite and thiosulfate. The oxidn. of cysteine to cystine
proceeds at low oxidn. potentials which, however, depend on the pH
value. The reaction can even lead to cysteic acid. If this takes
place, according to the prevailing oxidn. potential also methionine
should be oxidized to methionine sulfoxide. The thioether
methionine requires at pH 5-6 a higher electrode potential as
cysteine. Neither treatment with H₂O₂ even at pH 12, nor a
treatment with peroxy acetic acid can affect, carbohydrates. In
order to oxidize them, periodic acid must be employed. Oxidn.

changes the **photog.** properties of the gelatin. The chem. ripening is inhibited and grain growth is accelerated. In this respect, peroxyacetic acid acts as a much more powerful oxidant than H₂O₂. Also, oxidn. destroys a component responsible for grain growth inhibition.

IT 70-18-8, Glutathione, reactions
 (oxidn. of, in **photog.** gelatin, growth of
silver halide grains in relation to)
 RN 70-18-8 HCA
 CN Glycine, L-.gamma.-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



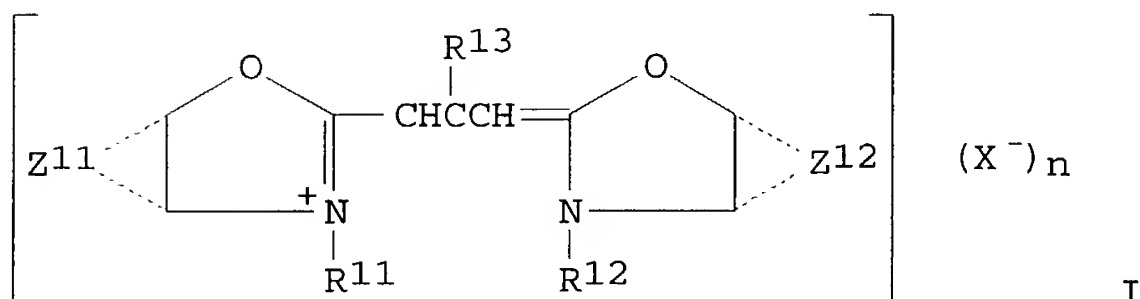
CC 74-2 (Radiation Chemistry, Photochemistry, and
 Photographic and Other Reprographic Processes)
 Section cross-reference(s): 45
 ST oxidn gelatin impurity **photog**
 IT Oxidation
 (of **photog.** gelatin, growth of **silver**
halide microcrystals in relation to)
 IT **Photographic** emulsions
 (oxidn. of gelatin for, growth of **silver halide**
 microcrystals and sensitivity in relation to)
 IT Aldehydes, reactions
 Carbohydrates and Sugars, reactions
 (oxidn. of impurities of, in **photog.** gelatin)
 IT 50-00-0, Formaldehyde, analysis
 (detn. of aldehydes as, in oxidn. of **photog.** gelatin)
 IT 59-23-4, Galactose, analysis
 (detn. of carbohydrates as, in oxidized **photog.**
 gelatin)
 IT 79-21-0, Peroxyacetic acid 7722-84-1, Hydrogen peroxide, reactions
 (oxidn. of **photog.** gelatin by, growth of **silver**
halide grains in relation to)
 IT 52-90-4, Cysteine, reactions 63-68-3, Methionine, reactions
 70-18-8, Glutathione, reactions
 (oxidn. of, in **photog.** gelatin, growth of
silver halide grains in relation to)

L44 ANSWER 20 OF 22 HCA COPYRIGHT 2003 ACS

112:168957 **Silver halide photographic**
 material containing sensitizer dye and nitrogen-containing
 heterocyclic derivative with mercapto group. Okumura, Mitsuhiro;

Chino, Shigeo (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 01197740 A2 19890809 Heisei, 22 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-22600 19880201.

GI



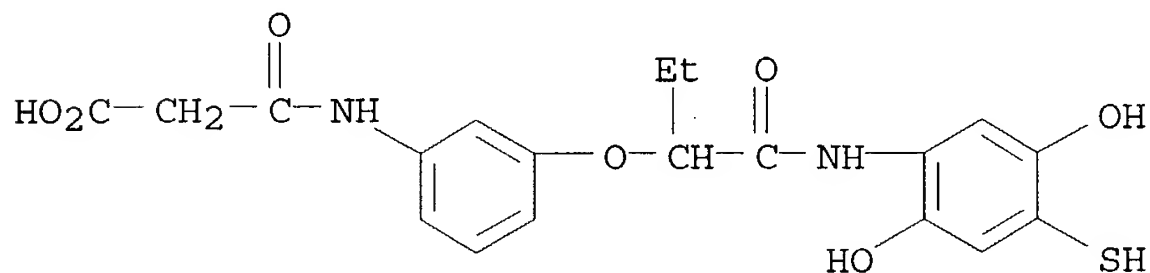
AB In the **photog.** material having a **photog.** constitutional layer (including **Ag halide** emulsion layers), .gtoreq.1 of emulsion layers contains **Ag halide** grains (contg. **AgCl** .gtoreq.80 mol.%) sensitized by a sensitizer dye I [Z11, Z12 = group necessary to form a benzene or naphthalene ring with a substituent, such as halogen, aryl, alkyl, or alkoxy; R11, R12 = alkyl, alkenyl, aryl; R13 = H, C1-3 alkyl; X = anion; n = 1, 0], Y[SL1(J1)k(L2)l(Z)m(L3)n(J2L4)p(G)q]r [L1-L4 = hydrocarbon group which may have a divalent substituent; J1, J2 = O, COO, OCO, CONR1, NR1CO, SO2NR1, NR1SO2, NR1CONR2, SO2, N:N, NR1, CO; Y = H, divalent bond, amidino; Z = heterocyclic group; G = sulfonic acid, carboxyl, phosphoric acid; R1, R2 = H, alkyl, aryl; k, l, m, n = 0-2; p = 0-4; q = 1-4; r = 1-2; when G = carboxyl, m = 1-2; when Y = divalent bond, r = 2], and N-contg. heterocyclic deriv. with a mercapto group. The **photog.** material can be used for rapid processing. Storage stability of emulsion can be improved.

IT 126325-22-2

(**photog.** emulsion layer contg., for improving storage stability)

RN 126325-22-2 HCA

CN Propanoic acid, 3-[[3-[1-[[2,5-dihydroxy-4-mercaptophenyl]amino]carbonyl]propoxy]phenyl]amino]-3-oxo- (9CI)
(CA INDEX NAME)

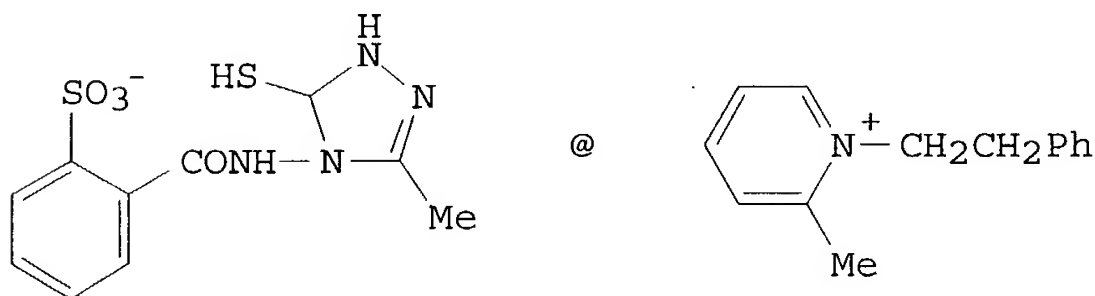


IC ICM G03C001-18

- ICS G03C001-02; G03C001-34
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST cyanine sensitizer dye **photog**; mercapto fog inhibitor
photog
- IT **Photographic** paper
(contg. cyanine sensitizer dye and mercapto fog inhibitor and
additive for improving processability and storage stability of
emulsion)
- IT **Photographic** sensitizers
(dye, cyanine, emulsion layer contg.)
- IT **Photographic** fog inhibitors
(emulsion layer contg.)
- IT Thiols, uses and miscellaneous
(**photog.** fog inhibitor)
- IT 3375-50-6 17636-11-2 25985-59-5 121680-12-4
126325-22-2
(**photog.** emulsion layer contg., for improving storage
stability)
- IT 86-93-1 2382-96-9, 2(3H)-Benzoxazolethione 5331-91-9
13980-76-2 38942-50-6 66473-10-7 81188-34-3 115948-45-3
126325-23-3
(**photog.** fog inhibitor)
- IT 18360-25-3 56133-67-6 101559-61-9 108831-31-8
(**photog.** sensitizer dye)

L44 ANSWER 21 OF 22 HCA COPYRIGHT 2003 ACS
110:182736 Fog-inhibition compounds for use in **silver**
halide photography. Piet, Kok; Jos, Vaes
(Agfa-Gevaert N. V., Belg.). Research Disclosure, 297, 45-50
(English) 1989. CODEN: RSDSBB. ISSN: 0374-4353. OTHER SOURCES:
MARPAT 110:182736.

GI



I

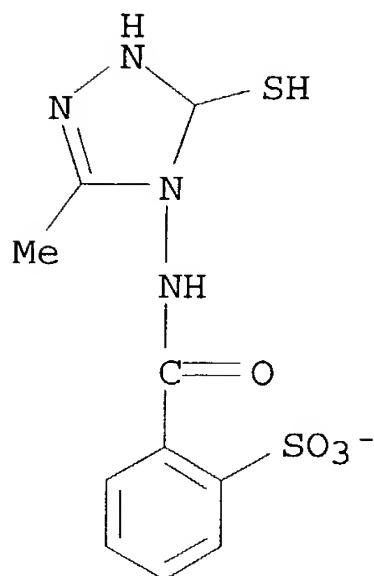
AB A complex onium additive is described which combines fog inhibiting
with other useful **photog.** properties. The additive
consists of mercapto-azole (fog inhibitor) anion and onium cation
(development activator), and can be incorporated into a hydrophilic,
or **Ag halide** emulsion layer at the
photog.-element. Thus, a poly(ethylene terephthalate)
support was coated with **AgCl** gelatin emulsion layer contg.

yl)amino]carbonyl]benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 119789-45-6

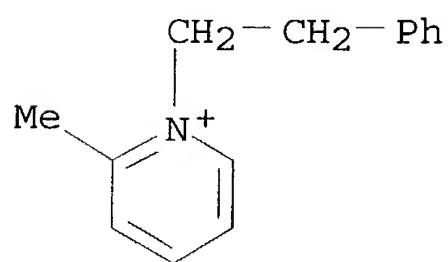
CMF C10 H11 N4 O4 S2



CM 2

CRN 51728-38-2

CMF C14 H16 N



- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST fog inhibitor onium complex **photog**; mercaptoazole onium
complex **photog**
- IT **Photographic** development
(mercapto-azo anion and onium cation additive combining fog
inhibiting properties with activation of)
- IT **Photographic** fog inhibitors
(mercapto-azo anion and onium cation complex, combining fog
inhibiting action with development activation)
- IT 119775-08-5
(for **photog**. applications, prepn. of,)
- IT 29871-24-7P 32022-92-7P
(**photog**. fog inhibiting compd. prepd. from reaction of)

IT 119789-46-7 120171-08-6
(photog. fog-inhibiting compd.)

L44 ANSWER 22 OF 22 HCA COPYRIGHT 2003 ACS

79:47808 Lithographic emulsions for high-temperature development.

Hofman, Emiel Alexander; Berendsen, Jules Robert; Pollet, Robert Joseph (Agfa Gevaert A. G.). Ger. Offen. DE 2244916

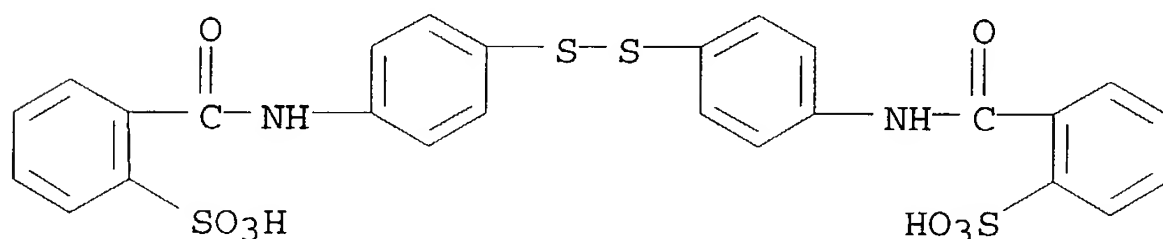
19730322, 19 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1972-2244916 19720913.

AB The fog during development of lith emulsions (>50% **AgCl**, >5% **AgBr**, <1% **AgI**) with lith type or Metol-hydroquinone developers at >30.degree. is reduced by addn. prior to coating of 5-1000 mg/mole **Ag halides** of bis-alkylene or bis-arylene disulfides with solubilizing SO₃H or CO₂H groups. Thus, 20 mg of (p-NaSO₃C₆H₄S)₂ reduced the fog of an emulsion developed for 4 min in a developer contg. hydroquinone, HCHONaHS- O₃, and a polyethylene glycol-Et₃PO₄ condensate as accelerator, of pH 10 and at 32.degree. from 0.24 to 0.08.

IT 38650-26-9
(photog. fog inhibitor, for lithog. emulsions)

RN 38650-26-9 HCA

CN Benzenesulfonic acid, 2,2'-[dithiobis(4,1-phenyleneiminocarbonyl)]bis-, disodium salt (9CI) (CA INDEX NAME)



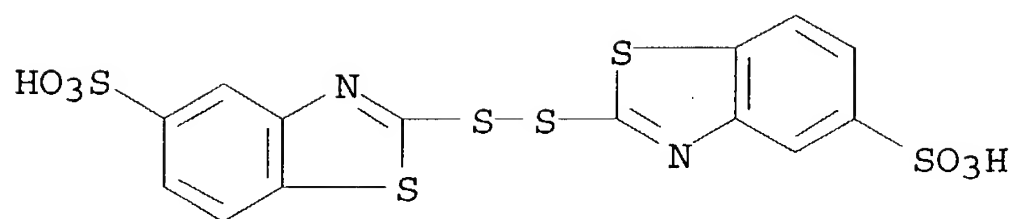
● 2 Na

IT 42726-53-4P

(prepn. of)

RN 42726-53-4 HCA

CN 5-Benzothiazolesulfonic acid, 2,2'-dithiobis-, disodium salt (9CI)
(CA INDEX NAME)



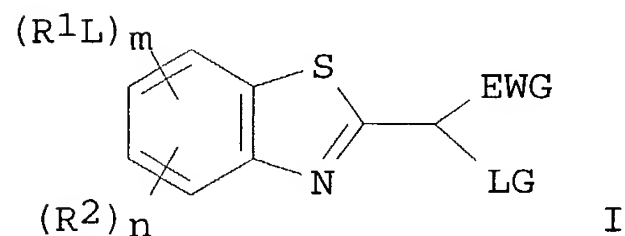
● 2 Na

IC G03C
 CC 74-2 (Radiation Chemistry, Photochemistry, and
 Photographic Processes)
 IT **Photographic** fog inhibitors
 (bisalkylene and bisarylene disulfides as, for lithog. emulsions)
 IT 1119-62-6 27738-87-0 27738-88-1 **38650-26-9**
 38650-27-0
 (photog. fog inhibitor, for lithog. emulsions)
 IT 7303-56-2P 42579-79-3P 42579-80-6P 42579-81-7P 42579-82-8P
 42579-83-9P **42726-53-4P**
 (prepn. of)

=> d 142 1-10 cbib abs hitstr hitind

L42 ANSWER 1 OF 10 HCA COPYRIGHT 2003 ACS
 135:264491 **Silver halide photographic**
 material containing yellow coupler and **image** forming
 method. Ogasawara, Atsushi; Uchida, Osamu (Fuji Photo Film Co.,
 Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001264947 A2
20010928, 39 pp. (Japanese). CODEN: JKXXAF. APPLICATION:
 JP 2000-82505 20000323.

GI



AB The material contains .gtoreq.1 coupler I [EWG = CN, carbamoyl,
 alkoxycarbonyl; LG = a group releasing by coupling with a color
 developer oxidn. product; L = linkage, bivalent linkage; R1 = group
 contg. .gtoreq.1 of CO2H, CONHSO2R3, SO2NHR3, SO2NHCOR3, NHSO2R3,
 SH, and OH; m = 1-4; n = 0-(4-m)]. **Images** are formed by

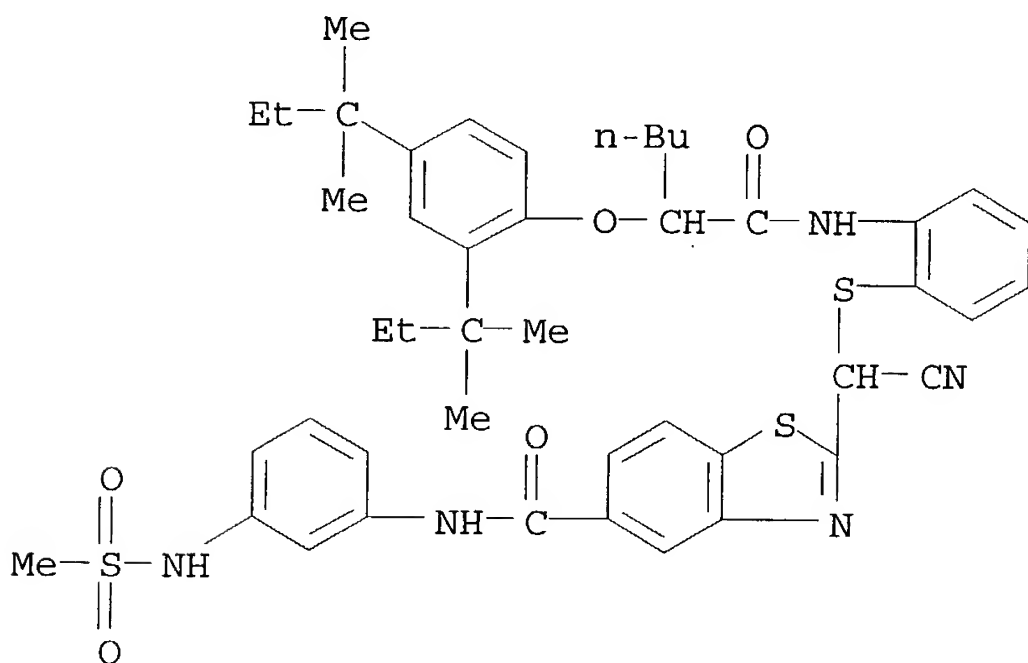
(a) heat-developing it, (b) developing it under alkali generated from a poorly sol. metal salt and its complex-forming agent, or (c) developing it by extending an alk. processing soln. to it. The material shows improved color development and storage stability.

IT 361483-54-7 361483-55-8 361483-56-9
361483-57-0

(benzothiazole deriv. photog. yellow coupler)

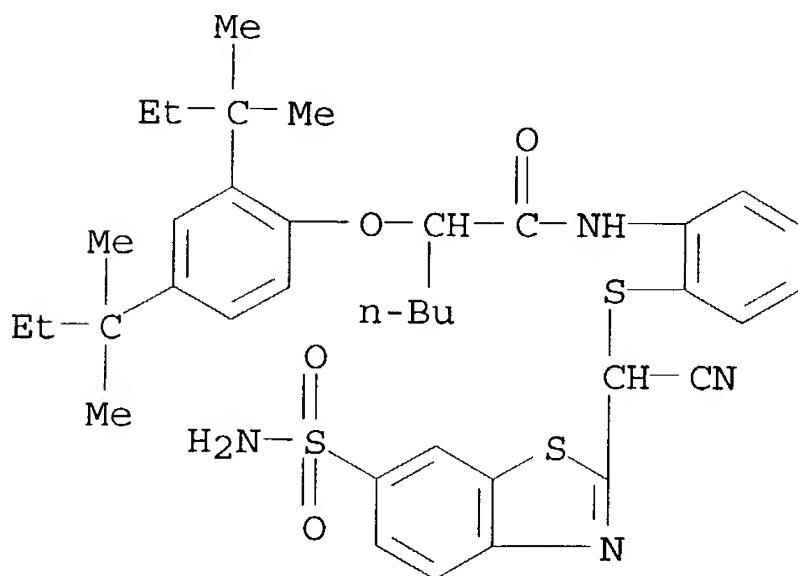
RN 361483-54-7 HCA

CN 5-Benzothiazolecarboxamide, 2-[[[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]phenyl]thio]cyanomethyl]-N-[3-[(methylsulfonyl)amino]phenyl]- (9CI) (CA INDEX NAME)



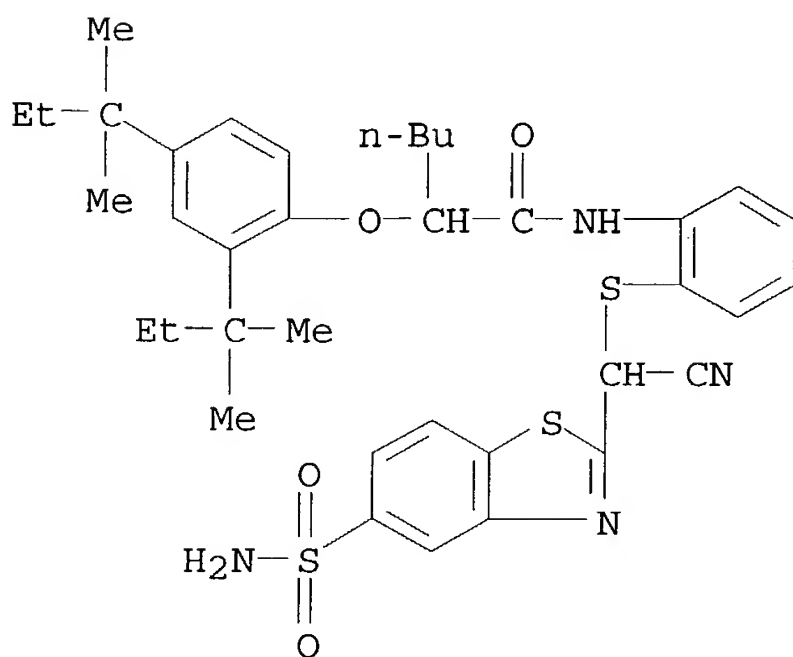
RN 361483-55-8 HCA

CN Hexanamide, N-[2-[[[6-(aminosulfonyl)-2-benzothiazolyl]cyanomethyl]thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



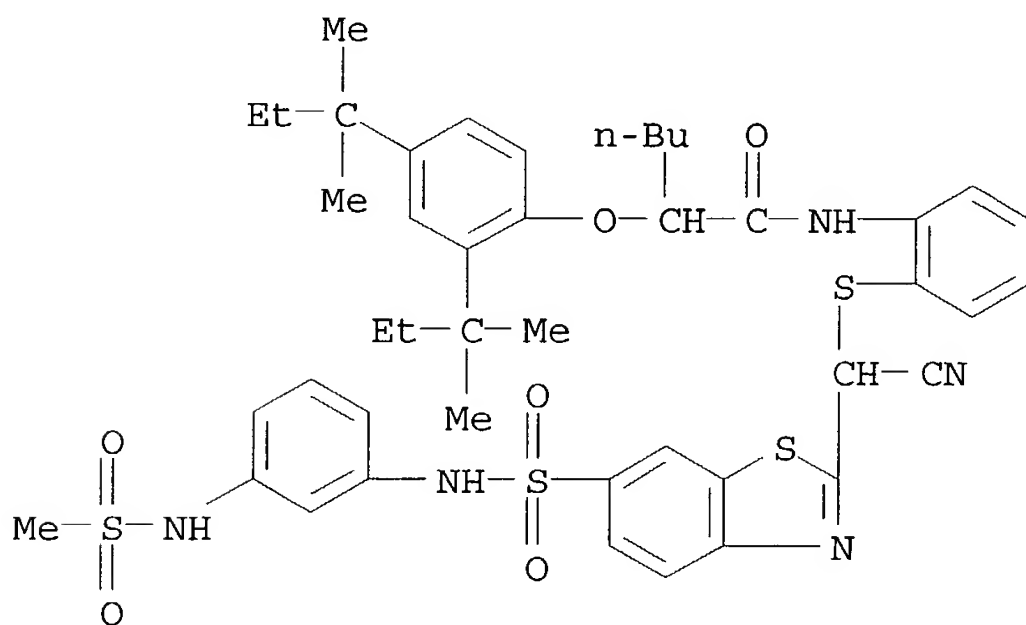
RN 361483-56-9 HCA

CN Hexanamide, N-[2-[[[5-(aminosulfonyl)-2-benzothiazolyl]cyanomethyl]thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy] - (9CI) (CA INDEX NAME)



RN 361483-57-0 HCA

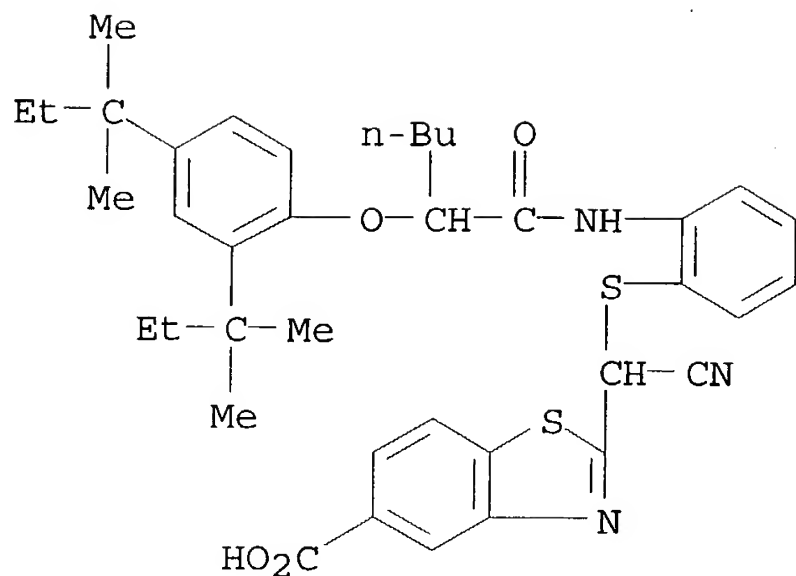
CN Hexanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[2-[[cyano[6-[[[3-[(methylsulfonyl)amino]phenyl]amino]sulfonyl]-2-benzothiazolyl]methyl]thio]phenyl]] - (9CI) (CA INDEX NAME)



IT 361483-53-6P 361483-58-1P
(benzothiazole deriv. photog. yellow coupler)

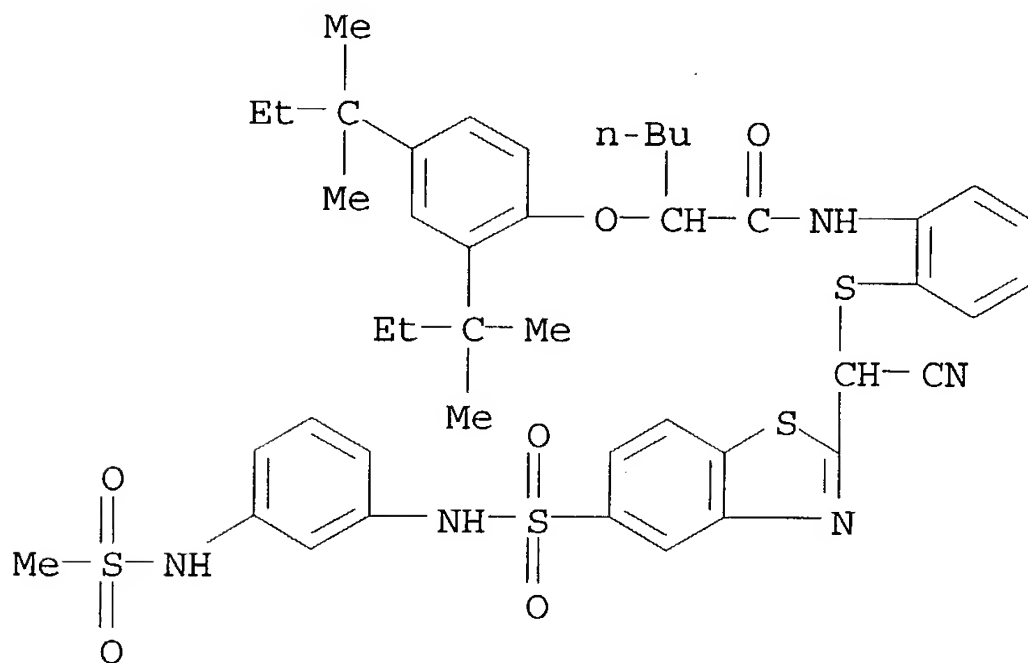
RN 361483-53-6 HCA

CN 5-Benzothiazolecarboxylic acid, 2-[[[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]phenyl]thio]cyanomethyl] - (9CI) (CA INDEX NAME)



RN 361483-58-1 HCA

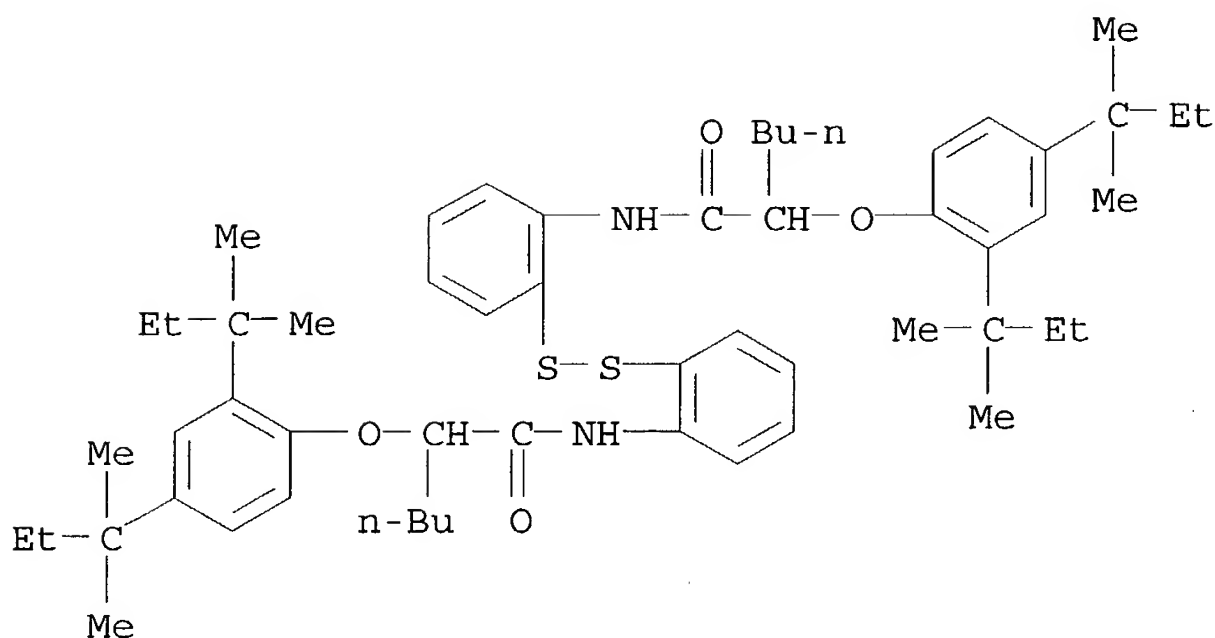
CN Hexanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[2-[[cyano[5-[[[3-[(methylsulfonyl)amino]phenyl]amino]sulfonyl]-2-benzothiazolyl]methyl]thio]phenyl]]- (9CI) (CA INDEX NAME)



IT 156146-02-0P 224947-53-9P 361483-61-6P
(prepn. of **benzothiazole** deriv. **photog.**
yellow coupler)

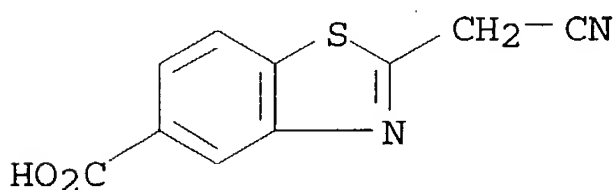
RN 156146-02-0 HCA

CN Hexanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]]- (9CI) (CA INDEX NAME)



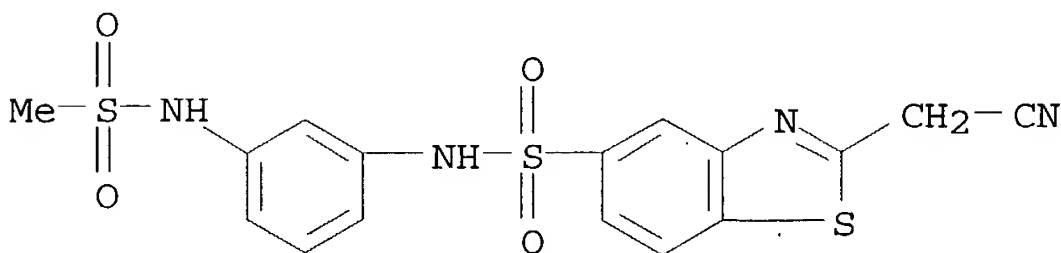
RN 224947-53-9 HCA

CN 5-Benzothiazolecarboxylic acid, 2-(cyanomethyl)- (9CI) (CA INDEX NAME)



RN 361483-61-6 HCA

CN 5-Benzothiazolesulfonamide, 2-(cyanomethyl)-N-[3-[(methylsulfonyl)amino]phenyl]- (9CI) (CA INDEX NAME)



IC ICM G03C008-40

ICS G03C008-10

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **benzothiazole** deriv **photog** yellow coupler; heat developable **photog** film yellow coupler; diffusion transfer **photog** film yellow coupler

IT Yellow couplers

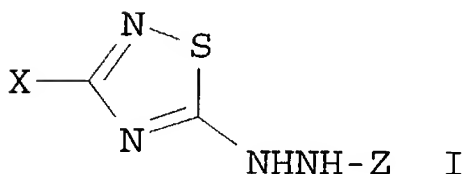
(benzothiazole deriv. photog. yellow coupler)

- IT Diffusion-transfer **photographic** films
(**benzothiazole** deriv. yellow coupler for
diffusion-transfer **photog.** film)
- IT **Photographic** films
(heat-developable; **benzothiazole** deriv. yellow coupler
for heat-developable **photog.** film)
- IT 361483-54-7 361483-55-8 361483-56-9
361483-57-0
(**benzothiazole** deriv. **photog.** yellow coupler)
- IT 361483-53-6P 361483-58-1P
(**benzothiazole** deriv. **photog.** yellow coupler)
- IT 49706-71-0P 156146-02-0P 224947-53-9P
361483-60-5P 361483-61-6P
(prepn. of **benzothiazole** deriv. **photog.**
yellow coupler)
- IT 96-99-1, 3-Nitro-4-chlorobenzoic acid 109-77-3, Malononitrile
1141-88-4 22868-13-9, Sodium sulfide (Na₂S₂) 63059-55-2
361483-59-2
(prepn. of **benzothiazole** deriv. **photog.**
yellow coupler)

L42 ANSWER 2 OF 10 HCA COPYRIGHT 2003 ACS

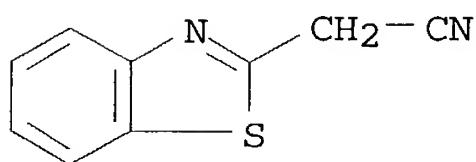
135:129516 Heat-developable color **photographic** material
showing good discrimination and diffusion transfer color
imaging method using the same. Kamosaki, Toru; Naruse,
Hideaki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho
JP 2001201834 A2 20010727, 62 pp. (Japanese). CODEN:
JKXXAF. APPLICATION: JP 2000-12229 20000120.

GI



- AB The title **photog.** material contains **photog.**
Ag halide grains, a color developing agent,
coupler, dye-releasing agent, dye having absorption at 600-900 nm,
and binder, wherein the color developing agent is represented by I
(X = halo, alkyl, aryl, heterocycle, alkylthio, arylthio, etc.; Z =
carbamoyl, acyl, alkoxycarbonyl, etc.), the dye-releasing agent is
represented by (Dye-Y)_n-Z [Dye = dye, dye precursor; Y = single
bond, connecting group; Z = group capable of effecting on
diffusibility; n = 1, 2], and the **Ag halide**
grain shows a spectral sensitivity peak at .gtoreq.700 nm.
- IT 56278-50-3, 2-Benzothiazoleacetonitrile
(prepn. of yellow coupler in heat-developable color
photog. material showing good discrimination)
- RN 56278-50-3 HCA

CN 2-Benzothiazoleacetonitrile (9CI) (CA INDEX NAME)

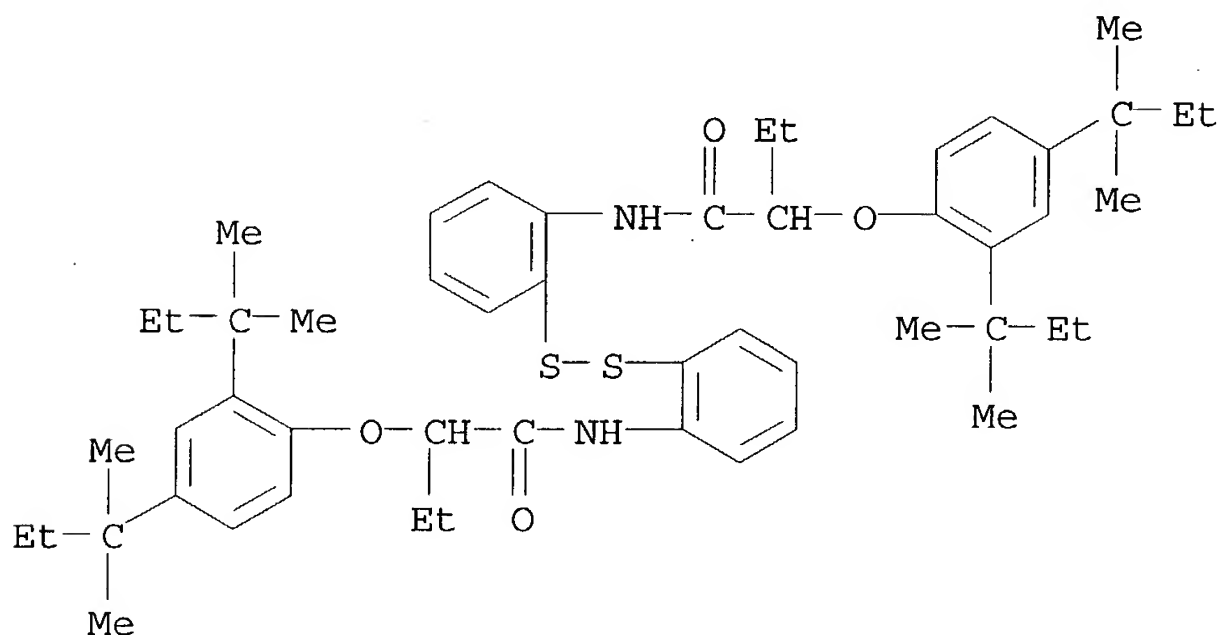


IT 156146-01-9P

(prepn. of yellow coupler in heat-developable color
photog. material showing good discrimination)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

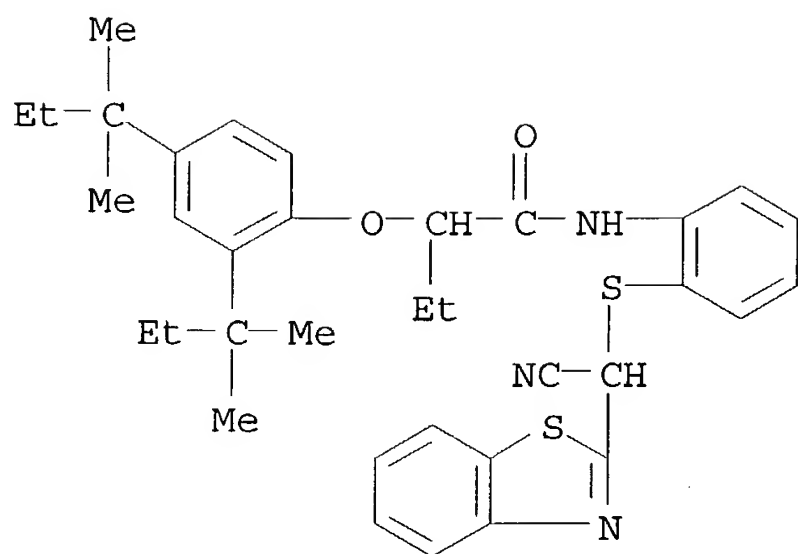


IT 307930-51-4P

(yellow coupler in heat-developable color **photog.**
material showing good discrimination)

RN 307930-51-4 HCA

CN Butanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



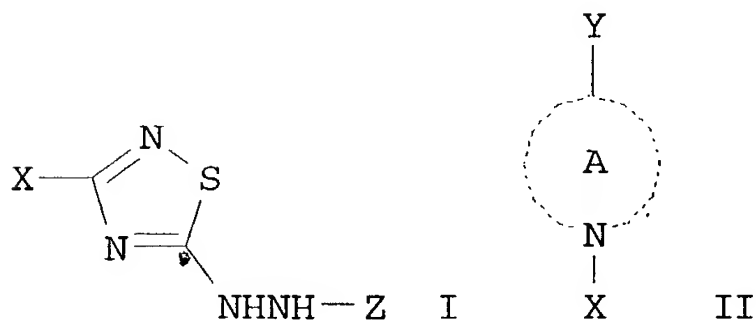
- IC ICM G03C008-40
ICS G03C008-40
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST heat developable color **photog** material diffusion transfer
development; photothermog **photoimaging** material diffusion
transfer color **imaging**
- IT **Photographic** developers
(diffusion-transfer; heat-developable color **photog**.
material showing good discrimination and diffusion transfer color
imaging method using the same)
- IT **Photoimaging** materials
Photothermographic copying
(heat-developable color **photog**. material showing good
discrimination and diffusion transfer color **imaging**
method using the same)
- IT **Photographic** emulsions
Photographic films
Photographic paper
(heat-developable; heat-developable color **photog**.
material showing good discrimination and diffusion transfer color
imaging method using the same)
- IT 321124-93-0P
(color developing agent in heat-developable color **photog**
. material showing good discrimination)
- IT 351026-51-2
(cyan DDR coupler in heat-developable color **photog**.
material showing good discrimination)
- IT 224579-47-9
(cyan-dye-releasing compd. in heat-developable color
photog. material showing good discrimination)
- IT 324008-56-2
(magenta coupler in heat-developable color **photog**.
material showing good discrimination)
- IT 594-42-3 7803-57-8 56406-50-9 74856-27-2, 7-Pentadecanamine

- (prepn. of color developing agent in heat-developable color **photog.** material showing good discrimination)
- IT 72802-02-9P 90110-85-3P 321124-92-9P
(prepn. of color developing agent in heat-developable color **photog.** material showing good discrimination)
- IT 75-36-5, Acetylchloride 103-16-2, Hydroquinonemonobenzyl ether 26272-90-2, Hexadecyl chloroformate
(prepn. of coupler in heat-developable color **photog.** material showing good discrimination)
- IT 171551-92-1P 301647-24-5P 301647-25-6P 301647-26-7P
(prepn. of coupler in heat-developable color **photog.** material showing good discrimination)
- IT 301310-06-5P
(prepn. of coupler in heat-developable color **photog.** material showing good discrimination)
- IT 1141-88-4 7791-25-5, Sulfuryl chloride 40567-16-6, 2-(2,4-Di-tert-amylphenoxy)butanoyl chloride 56278-50-3, 2-Benzothiazoleacetoneitrile
(prepn. of yellow coupler in heat-developable color **photog.** material showing good discrimination)
- IT 156146-01-9P
(prepn. of yellow coupler in heat-developable color **photog.** material showing good discrimination)
- IT 307930-51-4P
(yellow coupler in heat-developable color **photog.** material showing good discrimination)

L42 ANSWER 3 OF 10 HCA COPYRIGHT 2003 ACS

135:99776 Color diffusion-transfer **photographic** materials and formation of **images**. Taguchi, Keiichi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001183786 A2 20010706, 57 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-364903 19991222.

GI



AB The materials comprise layers for transfer and fixing of diffusive dyes, formed by exposure and development of a photosensitive layer. In the materials the photosensitive layers contain photosensitive **Ag halide**, binders, and compds. which generate or form diffusive dyes by reaction with thiadiazole developing agents I

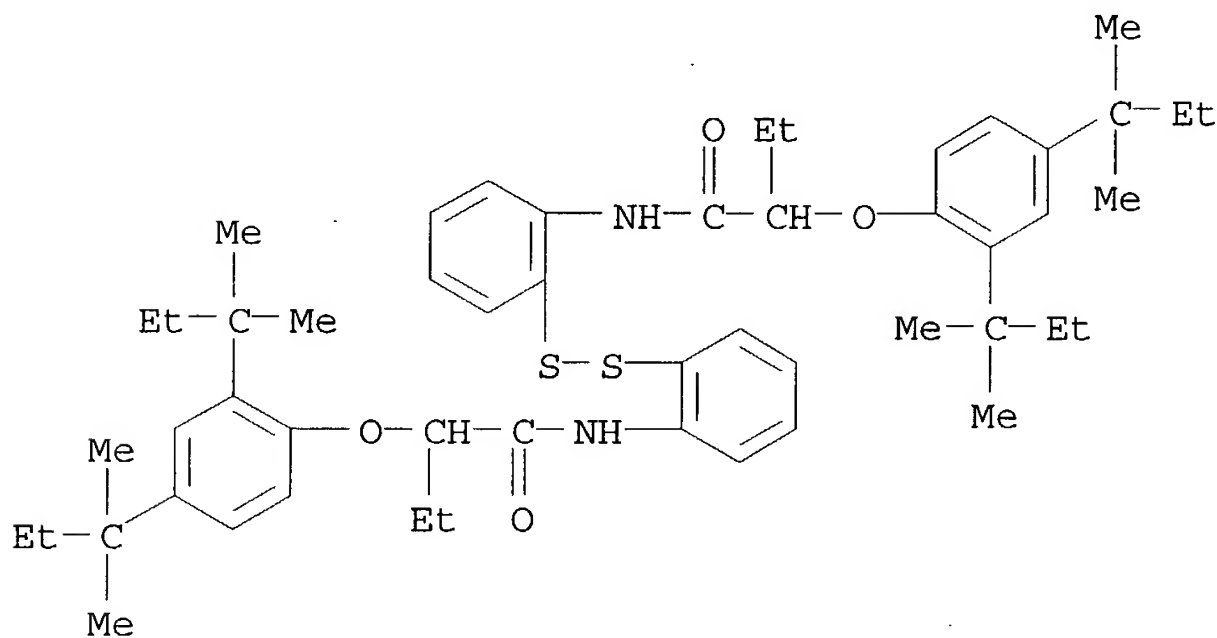
(X = halogen, alkyl, aryl, heterocycle, alkylthio, arylthio, heterocyclothio, alkylsulfinyl, arylsulfinyl, alkylsulfonyl, arylsulfonyl, sulfamoyl; Z = carbamoyl, acyl, alkoxycarbonyl, aryloxy, oxyradical, OH, group forming (hydroxy)imino by hydrolysis; Y = group forming covalent bond with reactive group in binder).
Images with excellent fastness are obtained.

IT 156146-01-9P

(color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-(9CI) (CA INDEX NAME)

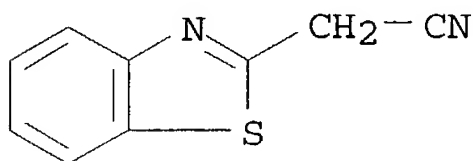


IT 56278-50-3, 2-Benzothiazoleacetonitrile

(color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

RN 56278-50-3 HCA

CN 2-Benzothiazoleacetonitrile (9CI) (CA INDEX NAME)

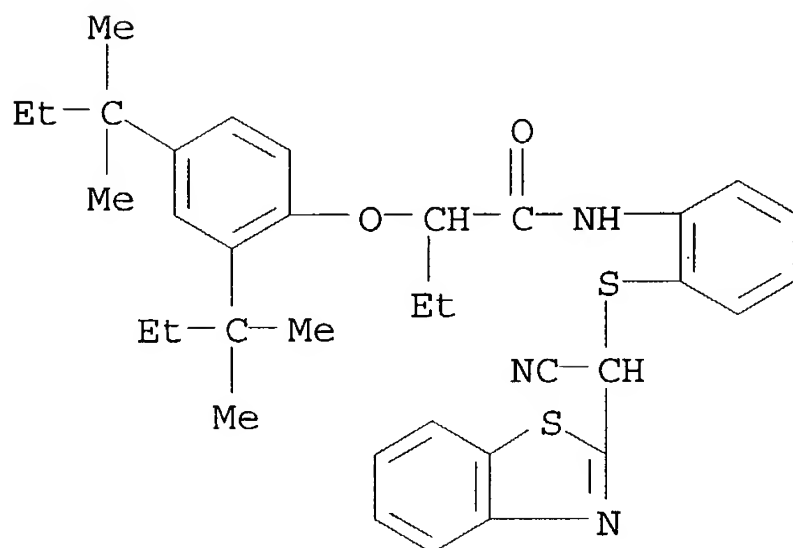


IT 307930-51-4P

(coupler; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

RN 307930-51-4 HCA

CN Butanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy] - (9CI) (CA INDEX NAME)

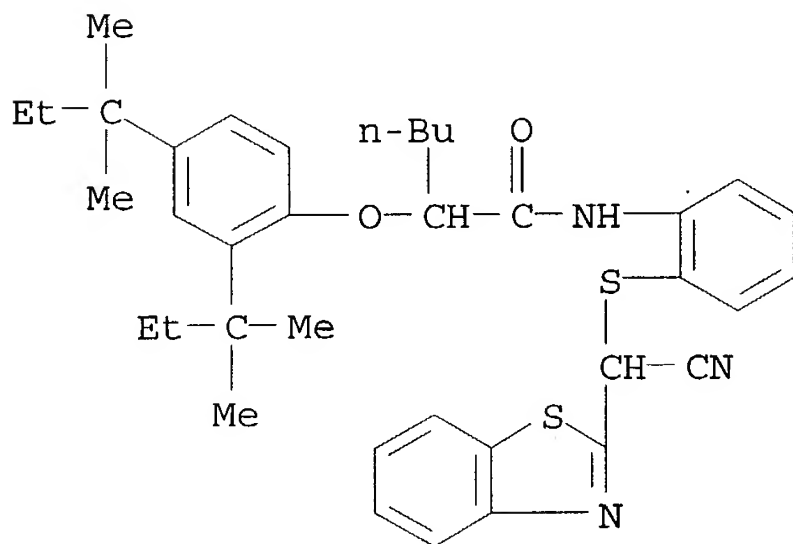


IT 308250-05-7

(coupler; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

RN 308250-05-7 HCA

CN Hexanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy] - (9CI) (CA INDEX NAME)



IC ICM G03C008-40

ICS G03C008-40

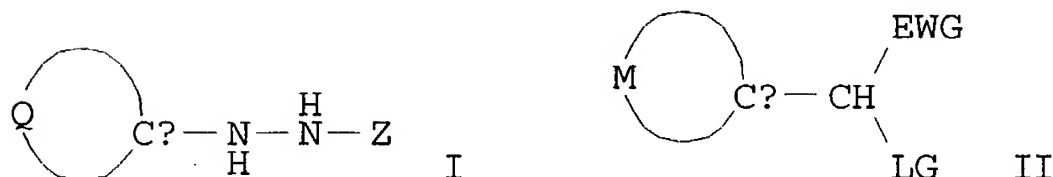
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST color diffusion transfer **photog** material; piperidine browning inhibitor diffusion transfer **photog**; thiadiazole developer color diffusion transfer **photog**IT **Photography**

- (color diffusion-transfer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT Diffusion-transfer **photographic** films
(color; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT **Photographic** couplers
Photographic developers
(diffusion-transfer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 1796-19-6 21270-85-9 83868-59-1 205309-44-0 288105-23-7
348603-36-1 348603-37-2 348603-38-3
(browning inhibitor; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 72802-02-9P 74856-27-2P, 7-Pentadecanamine 90110-85-3P
156146-01-9P 171551-92-1P 301647-24-5P 301647-25-6P
301647-26-7P 321124-92-9P
(color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 75-36-5, Acetyl chloride 103-16-2 594-42-3 1141-88-4
3459-99-2 7791-25-5, Sulfuryl chloride 7803-57-8 26272-90-2
40567-16-6 **56278-50-3, 2-Benzothiazoleacetoneitrile**
(color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 301310-06-5P **307930-51-4P**
(coupler; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 301647-21-2 **308250-05-7** 324008-56-2
(coupler; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 321124-93-0P
(developer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 321124-95-2 324008-65-3 348603-39-4
(developer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)
- IT 103437-05-4
(mordant polymer in fixing layer; color diffusion-transfer **photog.** films with thiadiazole developers and dye-fixing layers contg. piperidine browning inhibitors)

material containing color developer and coupler and **image** formation. Uchida, Osamu; Ishiwata, Yasuhiro; Katsumata, Taiji (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000321736 A2 **20001124**, 68 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-127299 19990507.

GI

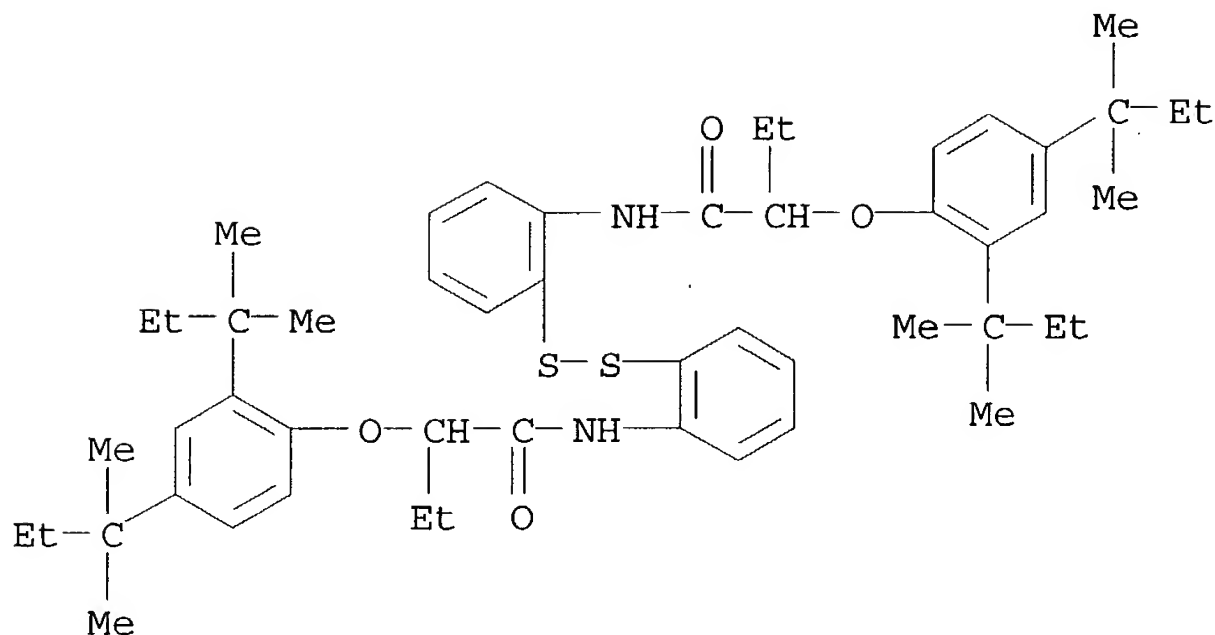


AB The material has a support and .gtoreq.1 hydrophilic colloid layer contg. .gtoreq.1 hydrazine color developer I (C.alpha. = carbons; Z = carbamoyl, acyl, alkoxy carbonyl, aryloxy carbonyl; Q = atoms required for forming an unsatd. ring with C.alpha.) and .gtoreq.1 coupler II (C.beta. = carbons; EWG = cyano, carbamoyl, alkoxy carbonyl; LG = group released by coupling-reaction with oxidn. product of developer; M = atoms required for forming 5-membered arom. heterocyclic ring with C.beta.). **Images** are formed by (a) heat-developing the material, (b) developing the material in the presence of alkali generated by poorly sol. metal salt and its complexing agent, or (c) developing the material with an alk. developer. The material showed improved color development to provide **images** with improved light, heat, and humidity stability.

IT **156146-01-9P**
(intermediate; **silver halide** color
photog. material involving hydrophilic layer contg.
yellow coupler from)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-(9CI) (CA INDEX NAME)



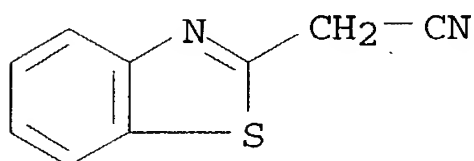
IT 56278-50-3, 2-Benzothiazoleacetonitrile

(silver halide color photog.

material involving hydrophilic layer contg. yellow coupler from)

RN 56278-50-3 HCA

CN 2-Benzothiazoleacetonitrile (9CI) (CA INDEX NAME)



IT 307930-51-4P

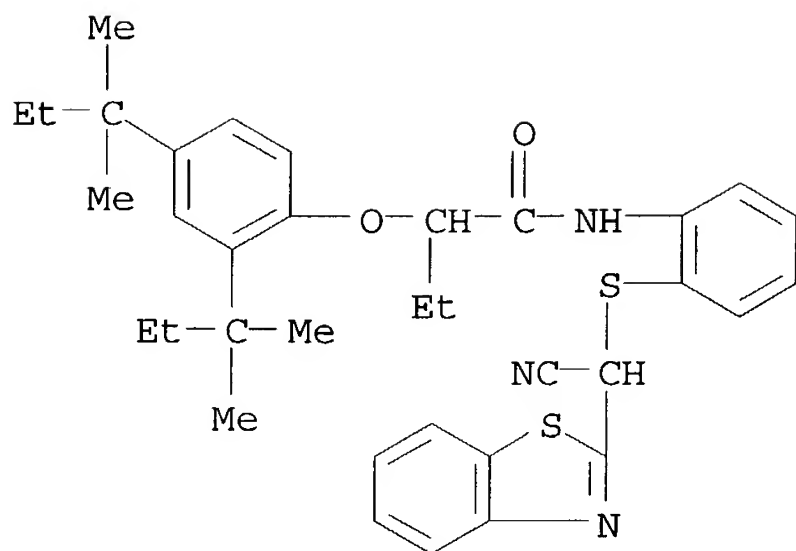
(yellow coupler; silver halide color

photog. material involving hydrophilic layer contg.

hydrazine developer and coupler)

RN 307930-51-4 HCA

CN Butanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



IT 307930-54-7 307930-57-0 307930-59-2

307930-61-6 307930-63-8 307930-67-2

307930-69-4 307930-71-8 307930-78-5

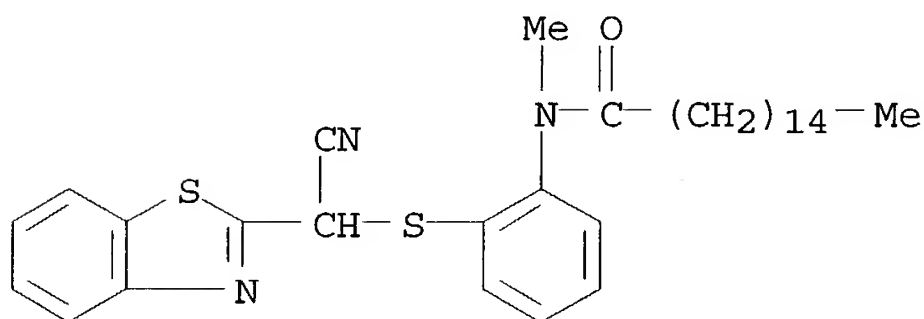
(yellow coupler; **silver halide** color

photog. material involving hydrophilic layer contg.

hydrazine developer and coupler)

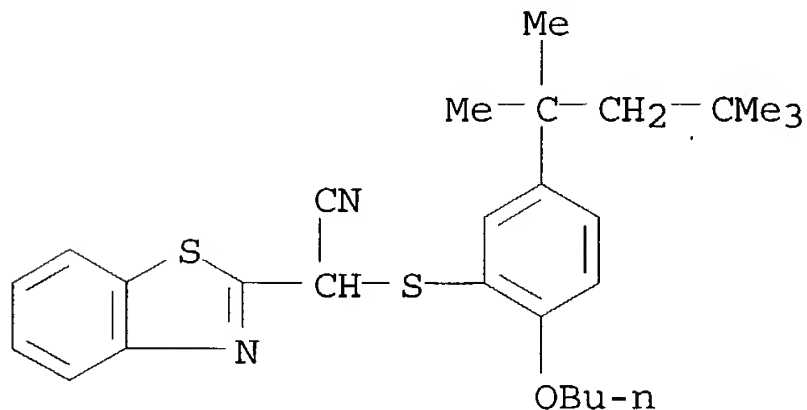
RN 307930-54-7 HCA

CN Hexadecanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-N-methyl- (9CI) (CA INDEX NAME)



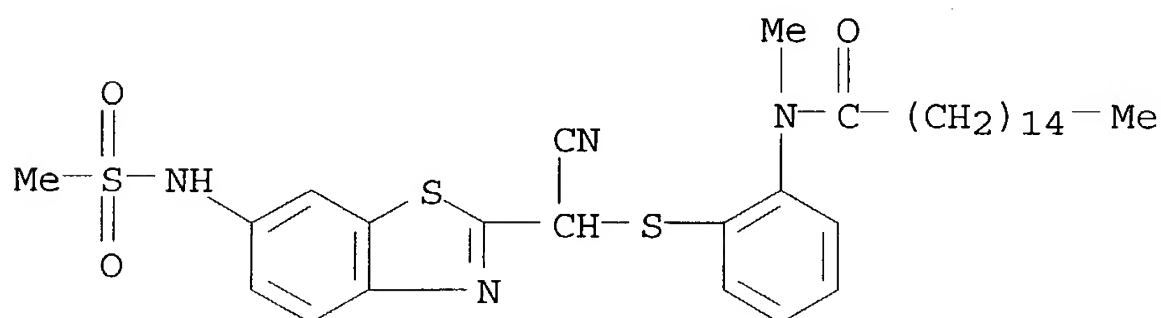
RN 307930-57-0 HCA

CN 2-Benzothiazoleacetonitrile, .alpha.-[[2-butoxy-5-(1,1,3,3-tetramethylbutyl)phenyl]thio]- (9CI) (CA INDEX NAME)



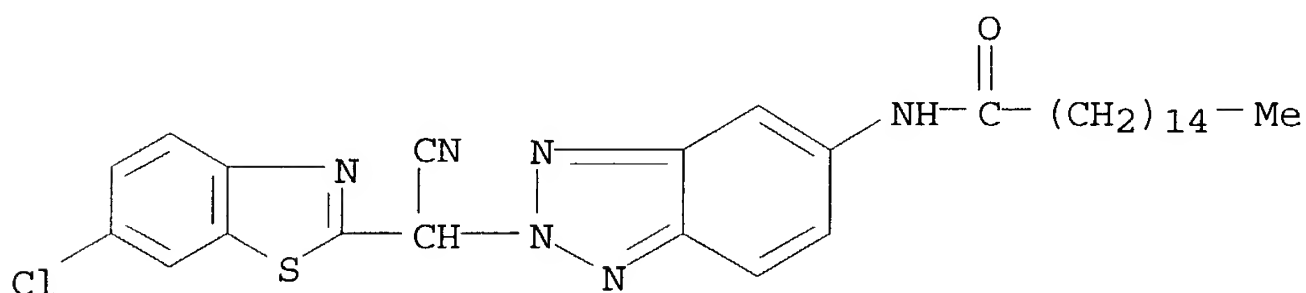
RN 307930-59-2 HCA

CN Hexadecanamide, N-[2-[[cyano[6-[(methylsulfonyl)amino]-2-benzothiazolyl]methyl]thio]phenyl]-N-methyl- (9CI) (CA INDEX NAME)



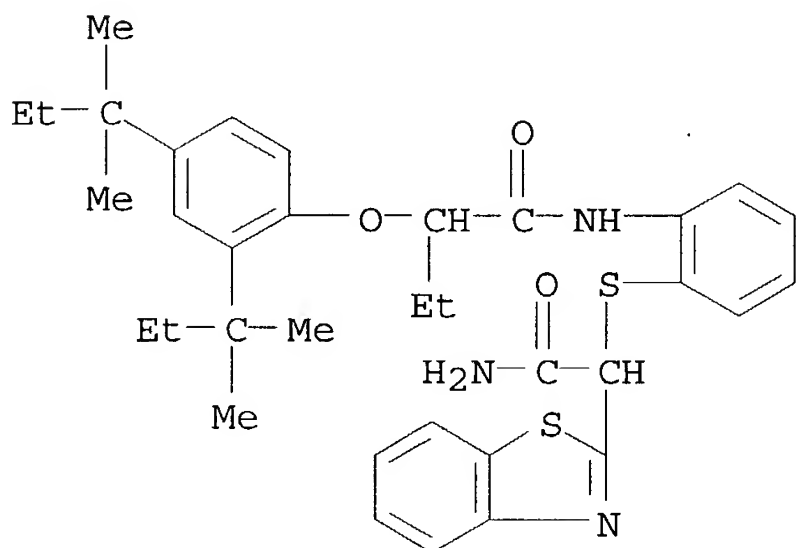
RN 307930-61-6 HCA

CN Hexadecanamide, N-[2-[(6-chloro-2-benzothiazolyl) cyanomethyl]-2H-benzotriazol-5-yl]- (9CI) (CA INDEX NAME)



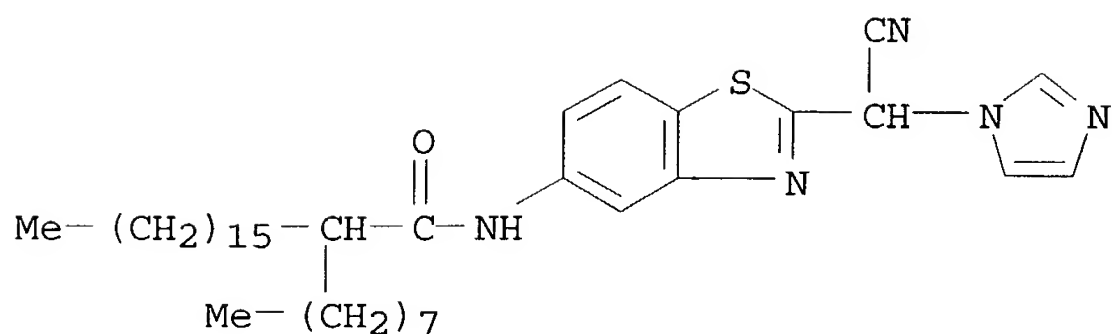
RN 307930-63-8 HCA

CN 2-Benzothiazoleacetamide, .alpha.-[[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxobutyl]amino]phenyl]thio]- (9CI) (CA INDEX NAME)

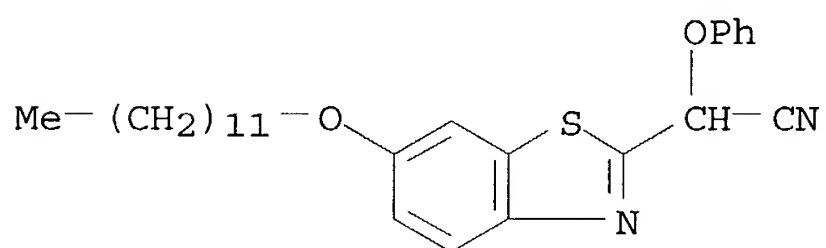


RN 307930-67-2 HCA

CN Octadecanamide, N-[2-(cyano-1H-imidazol-1-ylmethyl)-5-benzothiazolyl]-2-octyl- (9CI) (CA INDEX NAME)

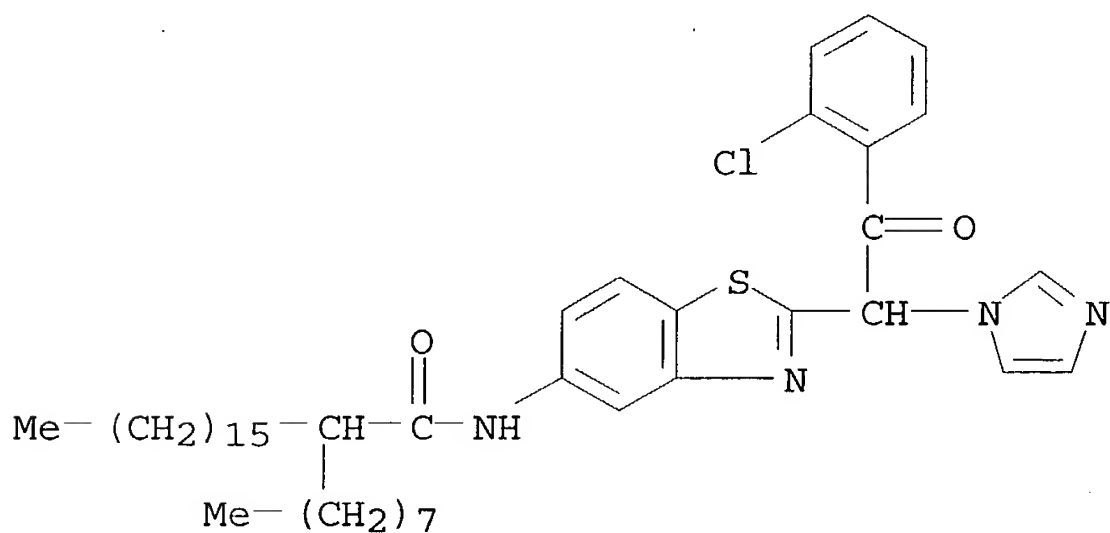


RN 307930-69-4 HCA

CN 2-Benzothiazoleacetoneitrile, 6-(dodecyloxy)-.alpha.-phenoxy- (9CI)
(CA INDEX NAME)

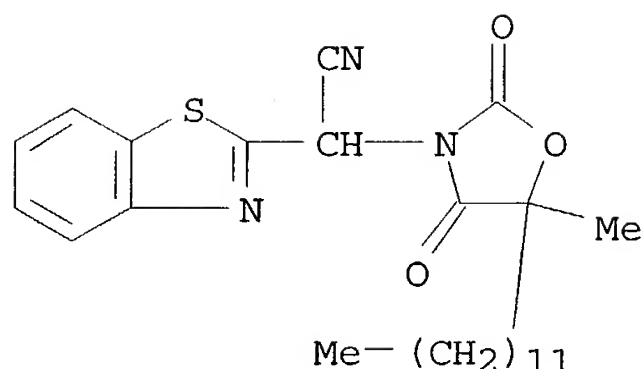
RN 307930-71-8 HCA

CN Octadecanamide, N-[2-[2-(2-chlorophenyl)-1-(1H-imidazol-1-yl)-2-oxoethyl]-5-benzothiazolyl]-2-octyl- (9CI) (CA INDEX NAME)



RN 307930-78-5 HCA

CN 2-Benzothiazoleacetoneitrile, .alpha.-(5-dodecyl-5-methyl-2,4-dioxo-3-oxazolidinyl)- (9CI) (CA INDEX NAME)



- IC ICM G03C007-392
ICS G03C001-42; G03C007-36; G03C007-407; G03C007-46; G03C008-40
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST **silver halide** color **photog** material;
photog developer hydrazine hydrophilic layer; coupler
silver halide photog material; poorly
sol metal salt **photog** development; complexing agent alk
condition **photog** development; heat development
silver halide photog emulsion
- IT Photothermographic copying
(for **silver halide** color **photog**.
material involving hydrophilic layer contg. hydrazine developer
and coupler)
- IT **Photographic** developers
Photographic development
Yellow couplers
(**silver halide** color **photog**.
material involving hydrophilic layer contg. hydrazine developer
and coupler)
- IT 301335-97-7P
(developer; **silver halide** color
photog. material involving hydrophilic layer contg.
hydrazine developer and coupler)
- IT 182297-11-6 190184-77-1 307496-43-1 307930-44-5 307930-45-6
307930-47-8
(developer; **silver halide** color
photog. material involving hydrophilic layer contg.
hydrazine developer and coupler)
- IT 72802-02-9P 90110-85-3P 192711-97-0P 307496-55-5P
(intermediate; **silver halide** color
photog. material involving hydrophilic layer contg.
hydrazine developer from)
- IT 156146-01-9P
(intermediate; **silver halide** color
photog. material involving hydrophilic layer contg.
yellow coupler from)
- IT 594-42-3P
(**silver halide** color **photog**.
material involving hydrophilic layer contg. hydrazine developer

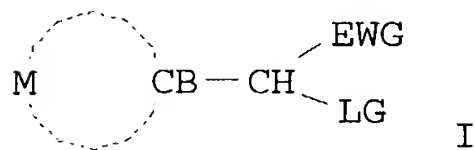
- from)
- IT 302-01-2, Hydrazine, reactions 56406-50-9 61053-26-7
(**silver halide color photog.**
material involving hydrophilic layer contg. hydrazine developer
from)
- IT 1141-88-4 40567-16-6 56278-50-3, 2-
Benzothiazoleacetone nitrile
(**silver halide color photog.**
material involving hydrophilic layer contg. yellow coupler from)
- IT 307930-51-4P
(yellow coupler; **silver halide color**
photog. material involving hydrophilic layer contg.
hydrazine developer and coupler)
- IT 307930-53-6 307930-54-7 307930-55-8 307930-56-9
307930-57-0 307930-59-2 307930-61-6
307930-63-8 307930-65-0 307930-67-2
307930-69-4 307930-71-8 307930-73-0
307930-74-1 307930-76-3 307930-78-5 307930-79-6
307930-83-2
(yellow coupler; **silver halide color**
photog. material involving hydrophilic layer contg.
hydrazine developer and coupler)

L42 ANSWER 5 OF 10 HCA COPYRIGHT 2003 ACS

133:367806 **Silver halide color photographic**

material containing specific coupler and **image** formation
using same. Uchida, Osamu; Ishiwata, Yasuhiro; Katsumata, Taiji
(Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP
2000321732 A2 20001124, 19 pp. (Japanese). CODEN:
JKXXAF. APPLICATION: JP 1999-127298 19990507.

GI



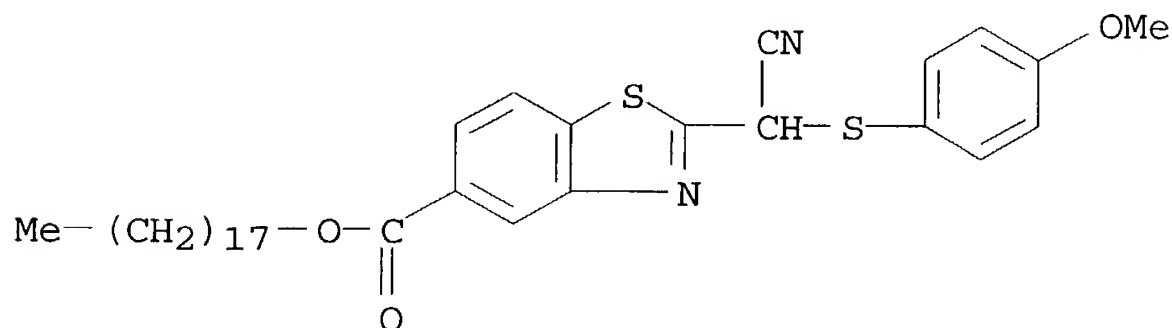
- AB The title **photog.** material contains .gtoreq.1 coupler of
the formula I (C.beta. = C atom; EWG = CN, carbamoyl,
alkoxycarbonyl; M = atoms required to form an arom. heterocycle
along with C.beta.; LG = arylthio) in .gtoreq.1 of the hydrophilic
colloid layers formed on a support. The material is heat-developed
or developed under such a condition that alkali is generated by a
slightly sol. metal salt and its complex-forming agent or by
developing an alk. processing soln. to form **images**. The
couplers show high coloring properties and stability and provides
high quality color **images** with high sharpness and storage
stability.
- IT 307932-84-9 307932-86-1 307932-88-3

307932-90-7 307932-92-9

(photog. coupler having arylthio group)

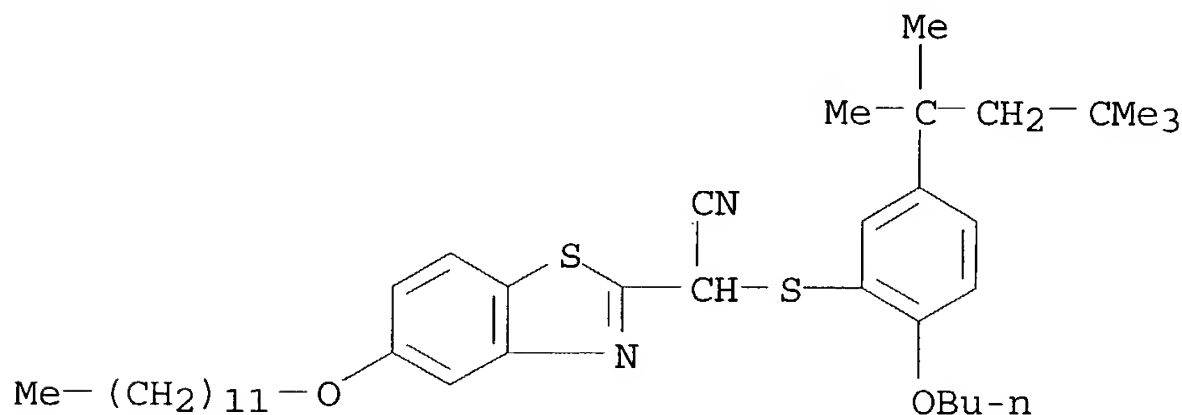
RN 307932-84-9 HCA

CN 5-Benzothiazolecarboxylic acid, 2-[cyano[(4-methoxyphenyl)thio]methyl]-, octadecyl ester (9CI) (CA INDEX NAME)



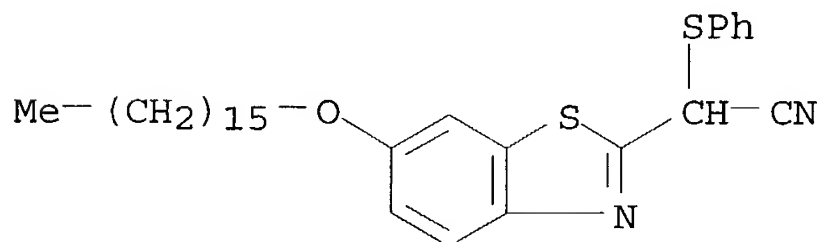
RN 307932-86-1 HCA

CN 2-Benzothiazoleacetonitrile, .alpha.-[[2-butoxy-5-(1,1,3,3-tetramethylbutyl)phenyl]thio]-5-(dodecyloxy)- (9CI) (CA INDEX NAME)



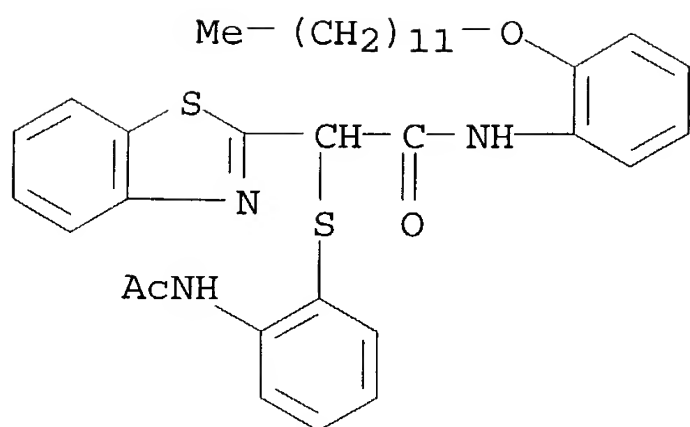
RN 307932-88-3 HCA

CN 2-Benzothiazoleacetonitrile, 6-(hexadecyloxy)-.alpha.-(phenylthio)- (9CI) (CA INDEX NAME)

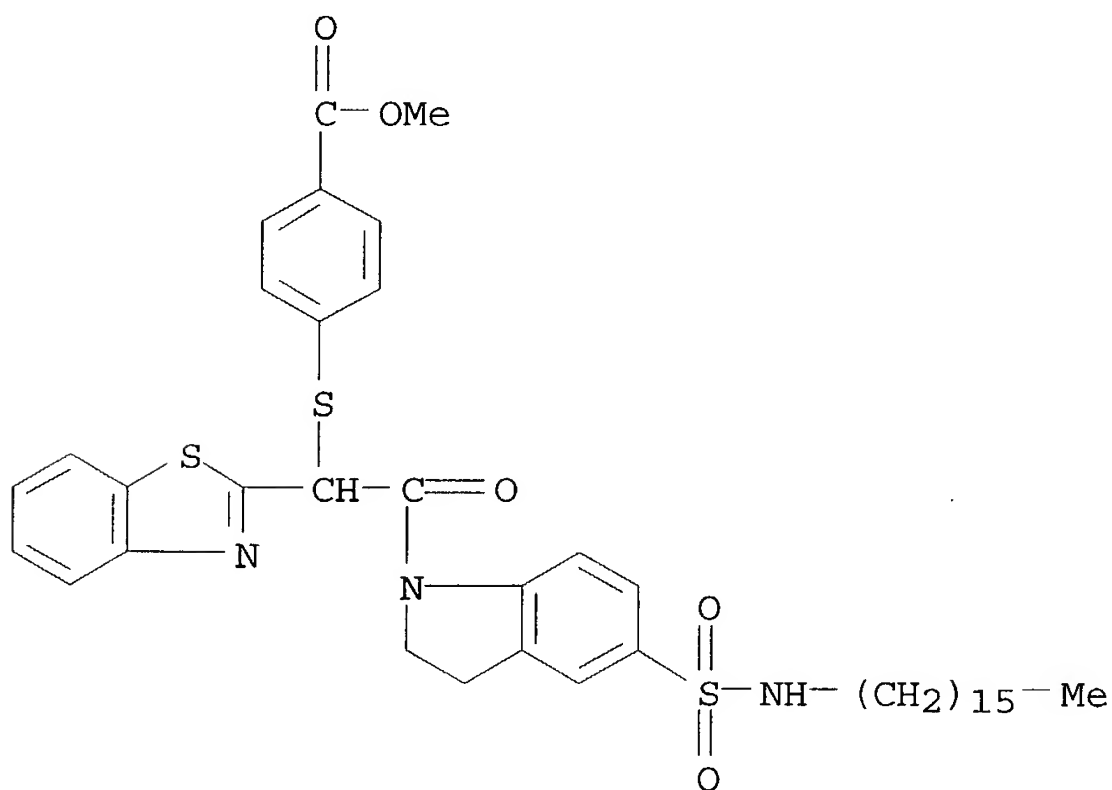


RN 307932-90-7 HCA

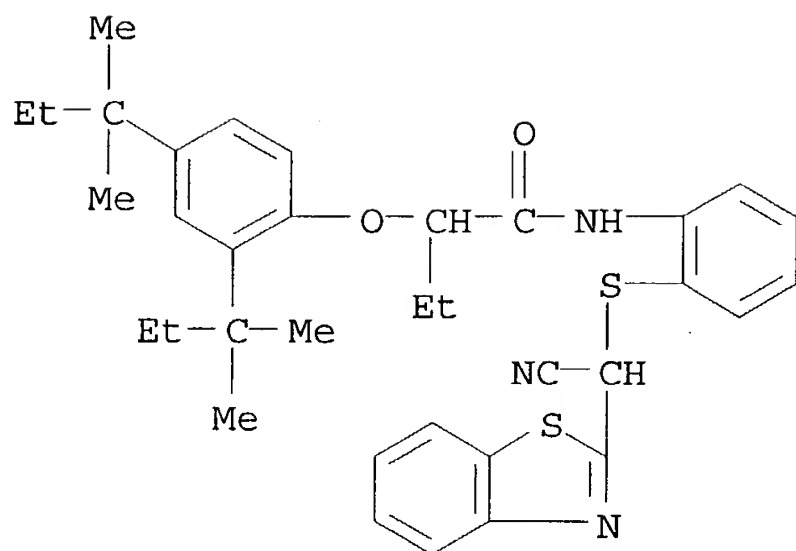
CN 2-Benzothiazoleacetamide, .alpha.-[[2-(acetylamino)phenyl]thio]-N-[2-(dodecyloxy)phenyl]- (9CI) (CA INDEX NAME)



RN 307932-92-9 HCA
 CN Benzoic acid, 4-[[1-(2-benzothiazolyl)-2-[5-
 [(hexadecylamino)sulfonyl]-2,3-dihydro-1H-indol-1-yl]-2-
 oxoethyl]thio]-, methyl ester (9CI) (CA INDEX NAME)



IT 307930-51-4P
 (photog. coupler having arylthio group)
 RN 307930-51-4 HCA
 CN Butanamide, N-[2-[(2-benzothiazolylcyanomethyl)thio]phenyl]-2-[2,4-
 bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

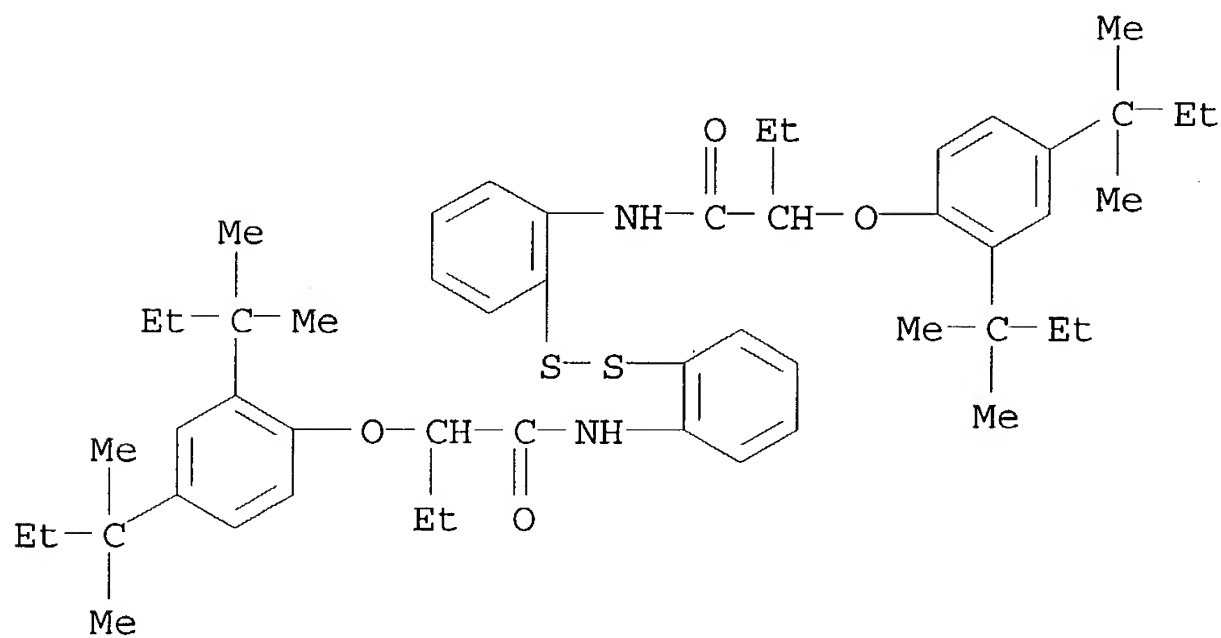


IT 156146-01-9P

(prepn. of **photog.** coupler)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

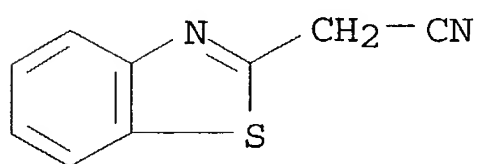


IT 56278-50-3, 2-Benzothiazoleacetonitrile

(prepn. of **photog.** coupler)

RN 56278-50-3 HCA

CN 2-Benzothiazoleacetonitrile (9CI) (CA INDEX NAME)



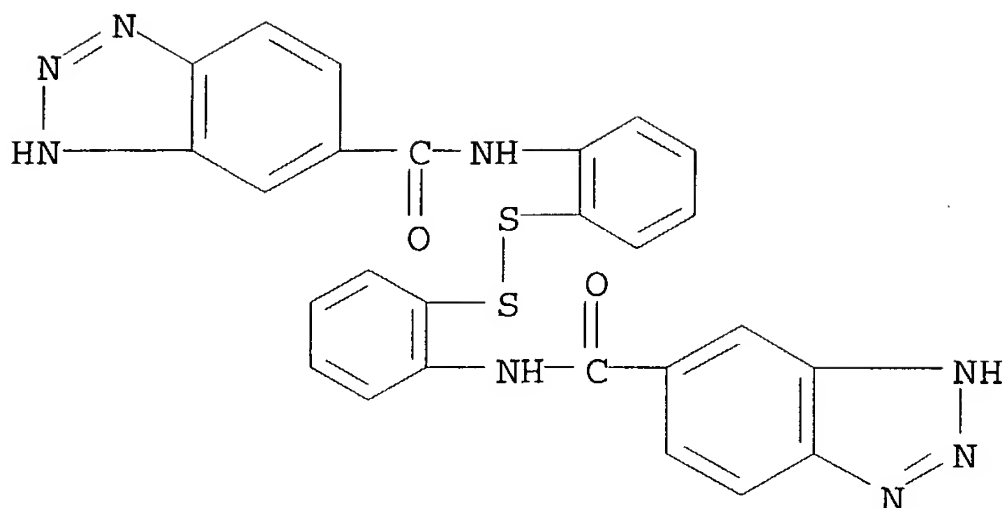
IC ICM G03C007-32
ICS G03C007-407; G03C007-46
CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
ST **photog** coupler heterocyclic arylthio compd
IT **Photographic** couplers
(**photog.** coupler having arylthio group)
IT 307932-84-9 307932-86-1 307932-88-3
307932-90-7 307932-92-9 307932-94-1
307932-96-3 307932-98-5 307933-00-2 307933-02-4 307933-04-6
(**photog.** coupler having arylthio group)
IT 307930-51-4P
(**photog.** coupler having arylthio group)
IT 156146-01-9P
(prepn. of **photog.** coupler)
IT 1141-88-4 40567-16-6 56278-50-3, 2-
Benzothiazoleacetonitrile
(prepn. of **photog.** coupler)

L42 ANSWER 6 OF 10 HCA COPYRIGHT 2003 ACS
130:189472 Heterocyclic disulfide and **silver halide**
photosensitive material. Asanuma, Naoki; Okada, Hisashi; Totani,
Ichizo (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho
JP 11043483 A2 19990216 Heisei, 48 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 1997-215760 19970725.

AB Title material contains Z1(L1)m1(A1)n1SSA2(L2)m2Z2 (Z1 = group
promoting adsorption to **Ag halide**; Z2 = H, group
promoting adsorption to **Ag halide**; L1, L2 =
linking group; A1, A2 = alkylene, arylene, heterocyclylene; m1, m2,
n1 = 0, 1; m1 + m2 + n1 .gtoreq. 1). The material may also contain
Q(Y)rCX1X2W (Q = alkyl, aryl, heterocyclyl; X1, X2 = halo; W = H,
electron-withdrawing group; Y = CO, SO, SO2; r = 0, 1). The
material shows low fog and high abrasion resistance and is useful as
heat-developable photosensitive material.

IT 220653-04-3P
(**silver halide** photosensitive material contg.
heterocyclic disulfide)

RN 220653-04-3 HCA
CN 1H-Benzotriazole-5-carboxamide, N,N'-(dithiodi-2,1-phenylene)bis-
(9CI) (CA INDEX NAME)

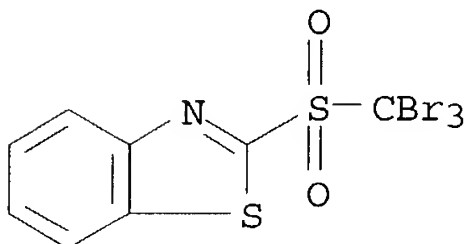


IT 31274-42-7 220653-01-0

(silver halide photosensitive material contg.
heterocyclic disulfide)

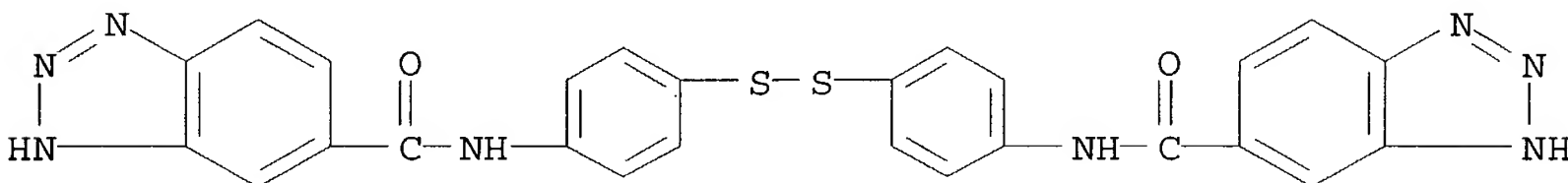
RN 31274-42-7 HCA

CN Benzothiazole, 2-[(tribromomethyl)sulfonyl]- (8CI, 9CI) (CA INDEX
NAME)



RN 220653-01-0 HCA

CN 1H-Benzotriazole-5-carboxamide, N,N'-(dithiodi-4,1-phenylene)bis-
(9CI) (CA INDEX NAME)



IC ICM C07D249-12

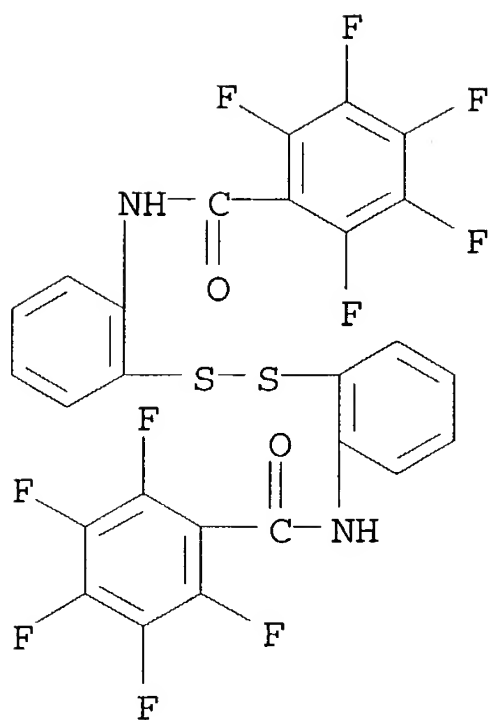
ICS C07D213-81; C07D235-28; C07D249-18; C07D257-04; C07D263-56;
C07D271-10; C07D277-72; C07D285-135; G03C001-00; G03C001-498

CC 74-7 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
Section cross-reference(s): 28

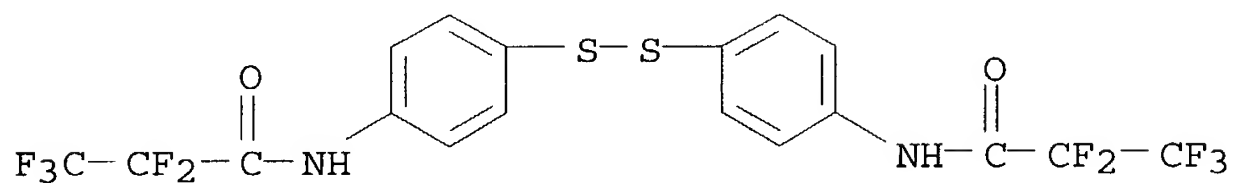
ST heterocyclic disulfide **silver halide**
photosensitive material; heat developable photosensitive material
heterocyclic disulfide

IT Photothermographic copying

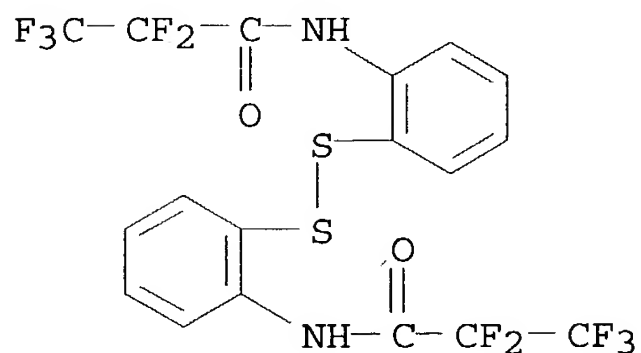
- (**silver halide** photosensitive material contg. heterocyclic disulfide)
- IT 102-28-3P 14070-48-5P 14124-34-6P 21548-91-4P, Sodium benzotriazole-5-sulfonate 92339-43-0P 220653-09-8P, 1-Ethoxycarbonyl-5-chlorosulfonylbenzotriazole (in prepn. of heterocyclic disulfide for **silver halide** photosensitive material)
- IT 122-28-1 5042-33-1 (in prepn. of heterocyclic disulfide for **silver halide** photosensitive material)
- IT 220652-99-3P 220653-00-9P 220653-02-1P 220653-03-2P 220653-04-3P (silver halide photosensitive material contg. heterocyclic disulfide)
- IT 17025-47-7 31274-42-7 160029-59-4 163342-70-9 200815-52-7 220653-01-0 220653-05-4 220653-06-5 220653-07-6 220653-08-7 (silver halide photosensitive material contg. heterocyclic disulfide)
- L42 ANSWER 7 OF 10 HCA COPYRIGHT 2003 ACS
- 127:154564 **Silver halide photographic** material containing sulfonyl and/or disulfide compound as fog inhibitor. Okada, Hisashi; Asanuma, Naoki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09160167 A2 19970620 Heisei, 32 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-315008 19951204.
- AB The **Ag halide** photosensitive material contains .gtoreq.1 compd. RSO₂LSO₂CX₁X₂A (I; R = aliph. hydrocarbon, aryl, heterocycle; L = divalent arylene or heterocycle; X₁, X₂ = halo; A = H, halo, electron-attracting group). The heat development photosensitive material contains .gtoreq.1 of I and optionally .gtoreq.1 compd. R₁SnR₂ (R₁, R₂ = aliph. hydrocarbon, aryl, heterocycle; n = 0-4). The materials shows high sensitivity and low fog and provides improved color quality **images**. Thus, a heat development photosensitive film was prepd. by using a **Ag halide** emulsion layer contg. p-MeSO₂C₆H₄SO₂CBr₃.
- IT 69200-87-9P 187744-22-5P 187744-23-6P 187744-24-7P (heat-developable **photog.** film contg. sulfonyl and/or disulfide compd. as fog inhibitor)
- RN 69200-87-9 HCA
- CN Benzamide, N,N'-(dithiodi-2,1-phenylene)bis[2,3,4,5,6-pentafluoro-(9CI) (CA INDEX NAME)



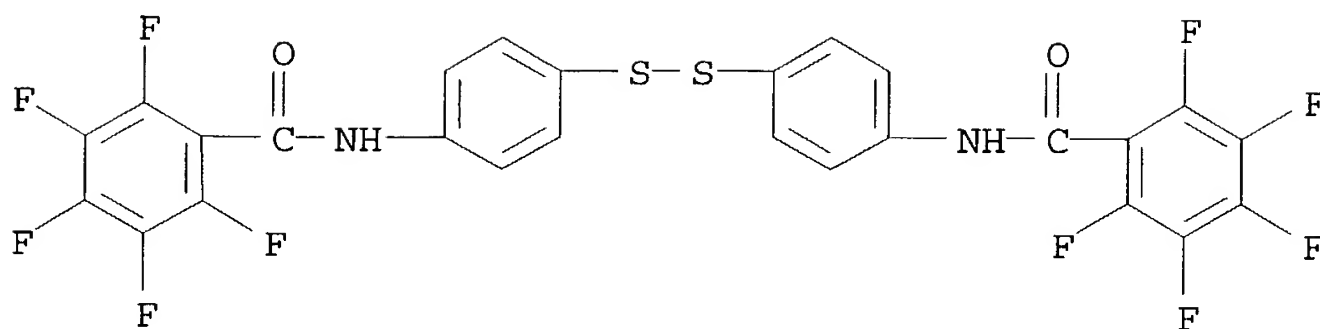
RN 187744-22-5 HCA
 CN Propanamide, N,N'-(dithiodi-4,1-phenylene)bis[2,2,3,3,3-pentafluoro-
 (9CI) (CA INDEX NAME)



RN 187744-23-6 HCA
 CN Propanamide, N,N'-(dithiodi-2,1-phenylene)bis[2,2,3,3,3-pentafluoro-
 (9CI) (CA INDEX NAME)



RN 187744-24-7 HCA
 CN Benzamide, N,N'-(dithiodi-4,1-phenylene)bis[2,3,4,5,6-pentafluoro-
 (9CI) (CA INDEX NAME)



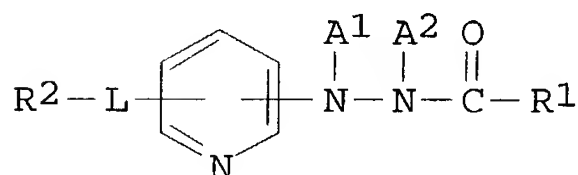
- IC ICM G03C001-498
ICS G03C001-00; G03C001-35
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST heat developable **photog** film fog inhibitor; sulfonyl compd
photog fog inhibitor; disulfide compd **photog** fog
inhibitor
- IT **Photographic** fog inhibitors
(heat-developable **photog**. film contg. sulfonyl and/or
disulfide compd. as fog inhibitor)
- IT **Photographic** films
(heat-developable **photog**. film contg. sulfonyl and/or
disulfide compd. as fog inhibitors)
- IT 152171-23-8P, [4-(Phenylthio)phenylthio] acetic acid
(bromination of; prepn. of sulfonyl compd. **photog**. fog
inhibitor)
- IT 187744-20-3 187744-21-4 187744-26-9 193342-81-3 193342-82-4
193342-83-5 193342-84-6 193342-85-7 193342-86-8
(heat-developable **photog**. film contg. sulfonyl and/or
disulfide compd. as fog inhibitor)
- IT 2527-63-1P 3982-42-1P 4104-52-3P 4490-97-5P 4508-09-2P
14897-91-7P 52017-43-3P **69200-87-9P** 152171-22-7P
187744-16-7P 187744-18-9P **187744-22-5P**
187744-23-6P 187744-24-7P 187744-25-8P
187744-29-2P 187744-31-6P 187744-32-7P 187744-33-8P
193342-87-9P 193342-88-0P 193342-89-1P 193342-90-4P
(heat-developable **photog**. film contg. sulfonyl and/or
disulfide compd. as fog inhibitor)
- IT 31183-89-8P, (2,2'-Diamino-5,5'-dichlorodiphenyl)disulfide
31183-91-2P, (2,2'-Diamino-5,5'-dimethyldiphenyl)disulfide
(prepn. of disulfide compd. **photog**. fog inhibitor)
- IT 62-53-3, Benzenamine, reactions 75-36-5, Acetyl chloride
85-46-1, 1-Naphthalenesulfonyl chloride 86-84-0, 1-Naphthalene
isocyanate 93-11-8, 2-Naphthalenesulfonyl chloride 95-24-9,
2-Amino-6-**chlorobenzothiazole** 98-09-9, Benzenesulfonyl
chloride 98-59-9, p-Toluenesulfonyl chloride 98-68-0,
p-Methoxybenzenesulfonyl chloride 98-88-4, Benzoyl chloride
103-71-9, Phenyl isocyanate, reactions 119-80-2 356-42-3,
Pentafluoropropionyl anhydride 722-27-0 773-64-8,
2-Mesitylenesulfonyl chloride 1141-88-4 2243-83-6,
2-Naphthalenecarbonyl chloride 2251-50-5, Pentafluorobenzoyl

chloride 2524-64-3 2536-91-6, 2-Amino-6-methylbenzothiazole 15945-07-0, 2,4,5-Trichlorobenzenesulfonyl chloride
(prepn. of disulfide compd. **photog.** fog inhibitor)
IT 3926-62-3, Sodium monochloroacetate 52872-99-8,
4-Phenylthiobenzenethiol
(prepn. of sulfonyl compd. **photog.** fog inhibitor)

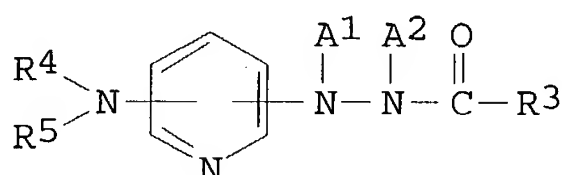
L42 ANSWER 8 OF 10 HCA COPYRIGHT 2003 ACS

117:58765 Nucleating agent-containing **photographic** material.
Onodera, Akira; Usagawa, Yasushi (Konica Co., Japan). Jpn. Kokai
Tokkyo Koho JP 03240037 A2 19911025 Heisei, 33 pp.
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-37772 19900219.

GI



I



II

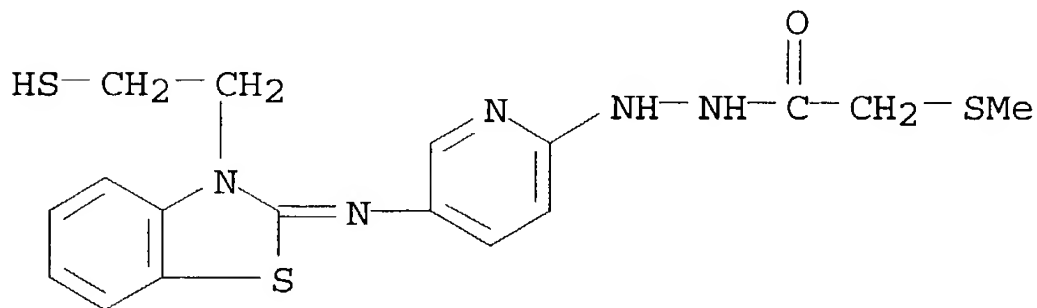
AB The title **photog.** material having .gtoreq.1 **Ag halide** emulsion layers contains I or II [A1,2 = H, acyl, sulfonyl, oxalyl; L = acrylamino, ureido, hydrazinocarbonylamino, hydrazonocarbonylamino; R1,3 = H, alkyl, aryl, heterocyclyl, carbamoyl, oxycarbonyl; R2 = **Ag halide**-adsorption-promoting moiety, diffusion-resisting moiety; R4,5 = H, alkyl, alkenyl, alkynyl, aryl, heterocyclyl]. This high photosensitivity and high contrast **photog.** material can produce high quality halftone **images** with reduced fog level.

IT 142492-71-5

(nucleating agent, **photog.** material contg.)

RN 142492-71-5 HCA

CN Acetic acid, (methylthio)-, 2-[5-[[3-(2-mercaptoethyl)-2(3H)-benzothiazolylidene]amino]-2-pyridinyl]hydrazide (9CI) (CA INDEX NAME)



IT 142492-58-8

(reaction of, **photog.** nucleating yeast from)

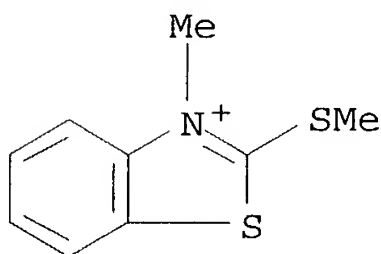
RN 142492-58-8 HCA

CN Benzothiazolium, 3-methyl-2-(methylthio)-, methanesulfonate (9CI)
(CA INDEX NAME)

CM 1

CRN 46045-65-2

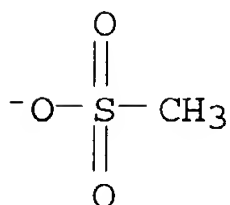
CMF C9 H10 N S2



CM 2

CRN 16053-58-0

CMF C H3 O3 S



IC ICM G03C001-06

ICS G03C001-34; G03C001-485

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)ST lithog **photog** material nucleating agentIT **Photographic** films**Photographic** paper(lithog. nucleating agent contg., for good halftone **image**
quality)

IT	142492-59-9	142492-60-2	142492-61-3	142492-62-4	142492-63-5
	142492-64-6	142492-65-7	142492-66-8	142492-67-9	142492-68-0
	142492-69-1	142492-70-4	142492-71-5	142492-72-6	
	142492-73-7	142492-74-8	142492-75-9	142513-35-7	

(nucleating agent, **photog.** material contg.)

IT	142492-52-2P	142492-53-3P	142492-54-4P	142492-55-5P
	142492-56-6P	142492-57-7P		

(prepn. and reaction of, **photog.** nucleating agent from)

IT	142492-43-1P	142492-44-2P	142492-45-3P	142492-46-4P
	142492-47-5P	142492-48-6P	142492-49-7P	142492-50-0P
	142492-51-1P			

(prepn. and use of, as nucleating agent, **photog.** material contg.)

IT 23249-96-9 36768-62-4 40567-16-6 46053-85-4,
1H-Benzotriazole-5-carbonyl chloride 51959-14-9 123919-01-7
142492-58-8
(reaction of, **photog.** nucleating yeast from)

L42 ANSWER 9 OF 10 HCA COPYRIGHT 2003 ACS

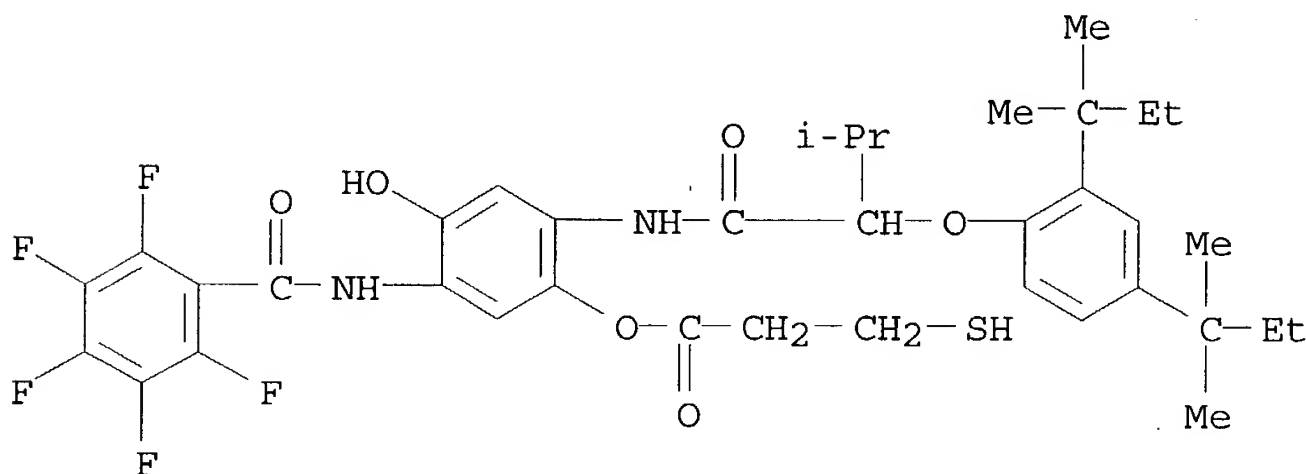
116:162453 **Silver halide** color **photographic** material containing bleach-accelerating silver salt. Hirabayashi, Shigeto; Nagaoka, Yoko (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 03230158 A2 **19911014** Heisei, 25 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-26365 19900205.

AB In the **photog.** material having .gtoreq.1 light-insensitive hydrophilic colloid layer contains (1) .gtoreq.1 light-sensitive layer contg. a compd. which releases a bleach-accelerator or its precursor by the reaction with the oxidized color developing agent and (2) .gtoreq.1 layer contg. a Ag salt of a bleach-accelerating compd. It has an excellent desilvering capability and provides an **image** with fine granularity. Ag salt of thiazolo-2-on-3-acetic acid was used as a bleach-accelerator.

IT **139695-72-0 139695-79-7**
(bleach accelerator-releasing **photog.** coupler)

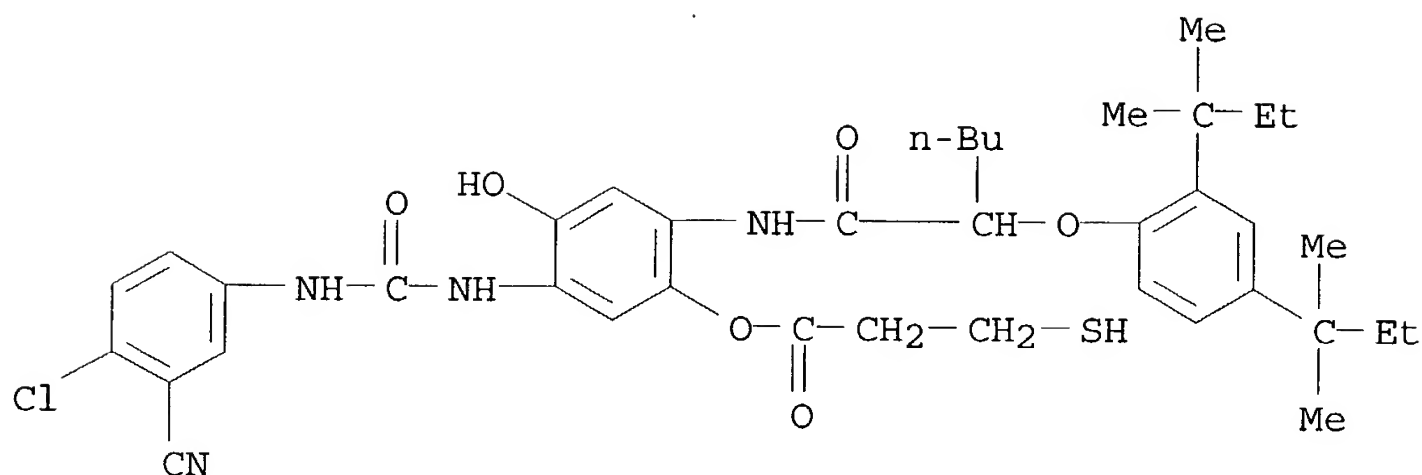
RN 139695-72-0 HCA

CN Propanoic acid, 3-mercapto-, 2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-3-methyl-1-oxobutyl]amino]-4-hydroxy-5-[(pentafluorobenzoyl)amino]phenyl ester (9CI) (CA INDEX NAME)



RN 139695-79-7 HCA

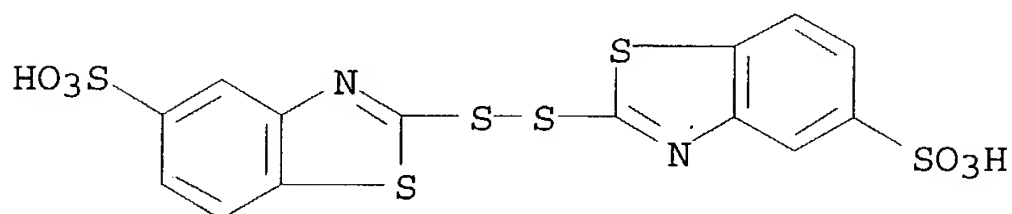
CN Propanoic acid, 3-mercapto-, 2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-5-[[[(4-chloro-3-cyanophenyl)amino]carbonyl]amino]-4-hydroxyphenyl ester (9CI) (CA INDEX NAME)



IT 42726-53-4

(photog. bleach accelerator)

RN 42726-53-4 HCA

CN 5-Benzothiazolesulfonic acid, 2,2'-dithiobis-, disodium salt (9CI)
(CA INDEX NAME)

● 2 Na

IC ICM G03C007-305

ICS G03C007-20; G03C007-28

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)ST bleach accelerator azole **photog** material; thiazoles bleach
accelerator **photog** material; thiourea deriv bleach
accelerator **photog**IT **Photographic** couplers

(bleach accelerator-releasing)

IT	105488-33-3	105504-92-5	115721-07-8	115721-11-4	126198-47-8
	130651-70-6	130651-71-7	130674-19-0	139695-59-3	139695-60-6
	139695-61-7	139695-62-8	139695-63-9	139695-64-0	139695-65-1
	139695-66-2	139695-67-3	139695-68-4	139695-69-5	139695-70-8
	139695-71-9	139695-72-0	139695-73-1	139695-74-2	
	139695-75-3	139695-76-4	139695-77-5	139695-78-6	
	139695-79-7	139695-80-0	139695-81-1	139700-68-8	
	139996-85-3				

(bleach accelerator-releasing **photog.** coupler)

IT 79-40-3, Ethanedithioamide 288-32-4, 1H-Imidazole, uses

444-27-9, 4-Thiazolidinecarboxylic acid 1072-11-3 2295-31-0,
 2,4-Thiazolidinedione 26725-50-8, 1H-Benzotriazole-4-sulfonic acid
 31061-23-1 **42726-53-4** 99127-74-9 137103-08-3
 137103-09-4 137103-10-7 139695-82-2 139695-83-3

(**photog.** bleach accelerator)

IT 96345-64-1P 139695-84-4P
 (prepn. of, **photog.** material contg.)

L42 ANSWER 10 OF 10 HCA COPYRIGHT 2003 ACS

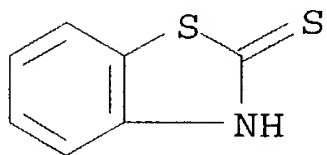
64:16012 Original Reference No. 64:2913d-e **Photographic**
 compositions. (E. I. du Pont de Nemours & Co.). FR 1410426
19650910, 62 pp. (Unavailable). APPLICATION: FR 19640805.

AB Solns. contg. a **Ag halide** and gelatin are
 treated with a mercaptan of the general formula RSH, HSRSH,
 p-RCONHC6H4SH, or a 2-mercaptothiazole, or a thiourea, or an
 aromatic mercaptan at 0.125-314 g. mercaptan/mole **Ag**
halide, and photosensitive layers are prep'd. from the
 compns., and the layers are exposed and washed with a solvent (of
Ag halide) to give pos. **Ag**
halide images. Thus, a Ag(Cl,Br) dispersion (70
 mole % **AgCl** + 30 mole % **AgBr**) (I) in gelatin,
 (I:gelatin ratio 28:1), is applied on a film at pH 6 to give 116 mg.
 I/dm.2, the film is dried, immersed 30 sec. in an aq. EtOH soln. (pH
 5.1) of 2-mercapto-4-phenylthiazole, dried, and exposed (behind a
 negative) 15 sec. The film is kept 30 sec. in 12.8% Na2S2O3, rinsed
 with H2O, and developed to give an exact reproduction.

IT **149-30-4, 2-Benzothiazolethiol 2182-90-3**
 , Benzanilide, 4'-mercapto-4-(pentyloxy) - **2457-82-1**,
 Terephthalanilide, 4',4''-dimercapto- **2488-85-9**,
 Phthalanilide, 4',4''-dimercapto- **2642-22-0**, Benzanilide,
 4'-mercapto-4-nitro- **2642-23-1**, p-Anisanilide,
 4'-mercapto-
 (**photographic** emulsion contg.)

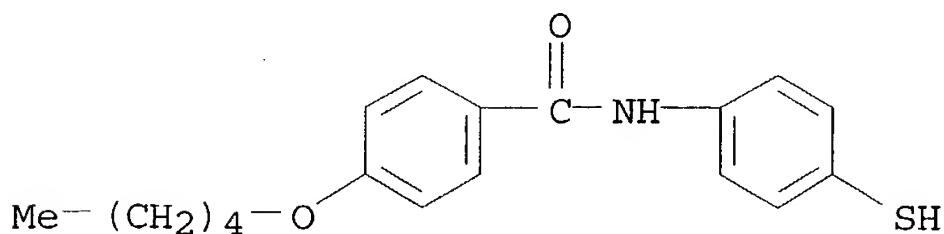
RN 149-30-4 HCA

CN 2(3H)-Benzothiazolethione (9CI) (CA INDEX NAME)

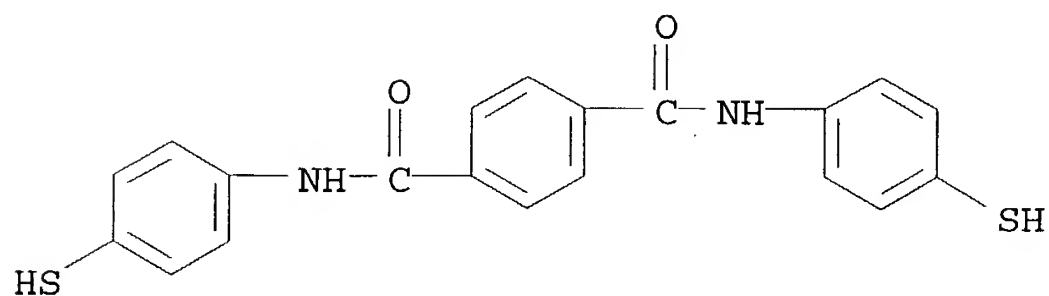


RN 2182-90-3 HCA

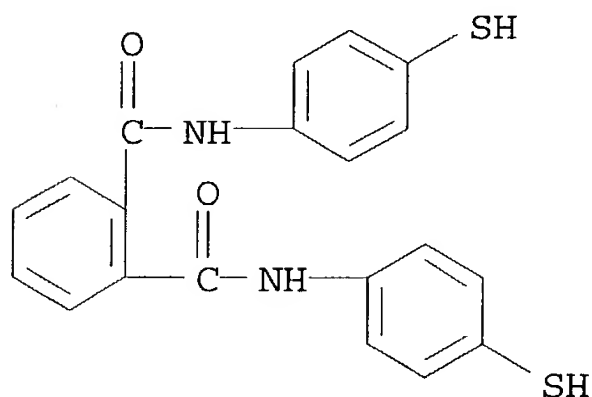
CN Benzanilide, 4'-mercapto-4-(pentyloxy) - (7CI, 8CI) (CA INDEX NAME)



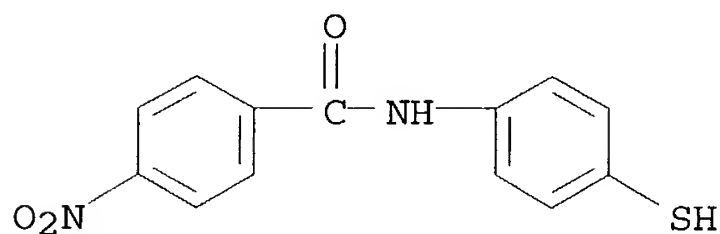
RN 2457-82-1 HCA
CN Terephthalanilide, 4',4''-dimercapto- (7CI, 8CI) (CA INDEX NAME)



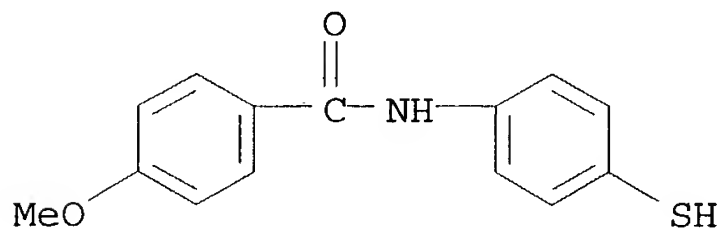
RN 2488-85-9 HCA
CN Phthalanilide, 4',4''-dimercapto- (7CI, 8CI) (CA INDEX NAME)



RN 2642-22-0 HCA
CN Benzanilide, 4'-mercapto-4-nitro- (7CI, 8CI) (CA INDEX NAME)



RN 2642-23-1 HCA
CN p-Anisanilide, 4'-mercapto- (7CI, 8CI) (CA INDEX NAME)



IC G03C
CC 11 (Radiation Chemistry and Photochemistry)

- IT **Photography**
(emulsions and sensitive materials or layers for, contg. mercaptans)
- IT Thiols
(**photographic** emulsion contg.)
- IT Succinonitrile, 2,3-dimercapto-
(bis(tetramethylammonium) deriv., **photographic** emulsion contg.)
- IT Cyanamide, dimercapto-
(dipotassium deriv., **photographic** emulsion contg.)
- IT Succinonitrile, 2,3-dimercapto-
(disodium deriv., cis-, **photographic** emulsion contg.)
- IT 2-Benzimidazolethiol, 5(or 6)-amino-
2-Benzimidazolethiol, 5(or 6)-nitro-
2-Benzothiazolethiol, (3-amidinoguanidino)phenyl-
Acetic acid, mercapto-, isooctyl ester
Benzenethiol
Benzenethiol, o-amino-
Benzenethiol, p-amino-
Isooctyl alcohol, 3-mercaptopropionate
Octanamide, N-(2-mercapto-6-benzothiazoyl)-
Sodium, [(1,2-dicyanoethylene)dithio]di-, cis-
.alpha.-Toluenethiol, 2-methoxy-4-vinyl-
(**photographic** emulsion contg.)
- IT 18771-18-1, Acrylic acid, 2-cyano-3,3-dimercapto-, ethyl ester
(di-K deriv., **photographic** emulsion contg.)
- IT 7340-98-9, 4-Isothiazolecarbonitrile, 3,5-dimercapto-
(disodium deriv., **photographic** emulsion contg.)
- IT 59-52-9, 1-Propanol, 2,3-dimercapto- 62-56-6, Urea, thio-
70-49-5, Succinic acid, mercapto- 75-33-2, 2-Propanethiol
75-66-1, 2-Propanethiol, 2-methyl- 79-19-6, Semicarbazide, thio-
86-88-4, Urea, 1-(1-naphthyl)-2-thio- 86-93-1,
1H-Tetrazole-5-thiol, 1-phenyl- 91-60-1, 2-Naphthalenethiol
96-27-5, 1,2-Propanediol, 3-mercapto- 96-53-7,
2-Thiazolidinethione 98-91-9, Benzoic acid, thio- 100-53-8,
.alpha.-Toluenethiol 102-08-9, Carbanilide, thio- 103-85-5,
Urea, 1-phenyl-2-thio- 106-45-6, p-Toluenethiol 106-53-6,
Benzenethiol, p-bromo- 106-54-7, Benzenethiol, p-chloro-
107-03-9, 1-Propanethiol 108-40-7, m-Toluenethiol 109-40-0,
Urea, 1,3-dioctyl-2-thio- 109-46-6, Urea, 1,3-dibutyl-2-thio-
109-79-5, 1-Butanethiol 110-66-7, 1-Pentanethiol 111-31-9,
1-Hexanethiol 111-55-7, Ethylene glycol, diacetate 111-88-6,
1-Octanethiol 112-55-0, 1-Dodecanethiol 137-06-4, o-Toluenethiol
141-59-3, 2-Pentanethiol, 2,4,4-trimethyl- 141-84-4, Rhodanine
143-10-2, 1-Decanethiol 147-93-3, Benzoic acid, o-mercapto-
149-30-4, 2-Benzothiazolethiol 496-74-2,
Toluene-3,4-dithiol 513-44-0, 1-Propanethiol, 2-methyl-
513-53-1, 2-Butanethiol 583-39-1, 2-Benzimidazolethiol 584-26-9,
Hydantoin, 1-acetyl-2-thio- 591-08-2, Urea, 1-acetyl-2-thio-
622-03-7, Carbohydrazide, 1,5-diphenyl-3-thio- 625-60-5, Acetic
acid, thio-, S-ethyl ester 627-04-3, Acetic acid, (ethylthio)-
630-10-4, Urea, seleno- 636-86-2, Hydantoin, 5-salicylidene-2-thio-

637-53-6, Acetanilide, thio- 645-96-5, Benzeneselenol
 1072-71-5, 1,3,4-Thiadiazole-2,5-dithiol 1126-81-4, Acetanilide,
 4'-mercapto- 1199-03-7, 2,3-Quinoxalinedithiol 1240-37-5, Urea,
 1,3-di-1-naphthyl-2-thio- 1424-14-2, Urea, 1,3-dibenzyl-2-thio-
 1444-47-9, Acetanilide, 2'-mercapto- 1455-21-6, 1-Nonanethiol
 1534-08-3, Acetic acid, thio-, S-methyl ester 1639-09-4,
 1-Heptanethiol 1679-08-9, 1-Propanethiol, 2,2-dimethyl-
 1849-36-1, Benzenethiol, p-nitro- 2076-67-7, Sodium,
 [(4-cyano-3,5-isothiazolediyl)dithio]di- 2084-19-7, 2-Pentanethiol
 2103-88-0, 2-Thiazolethiol, 4-phenyl- 2182-83-4, Hexananilide,
 4'-mercapto- 2182-85-6, Propionanilide, 4'-mercapto-2-methyl-
 2182-86-7, Butyranilide, 4'-mercapto-3-methyl- 2182-87-8,
 Octananilide, 4'-mercapto- 2182-88-9, Dodecananilide, 4'-mercapto-
 2182-89-0, 1-Naphthanilide, 4'-mercapto- **2182-90-3**,
 Benzanilide, 4'-mercapto-4-(pentyloxy)- 2182-91-4,
 Cyclohexanecarboxanilide, 4'-mercapto- 2382-96-9,
 2-Benzoxazolethiol 2396-68-1, Benzenethiol, p-tert-butyl-
2457-82-1, Terephthalanilide, 4',4''-dimercapto-
2488-85-9, Phthalanilide, 4',4''-dimercapto- 2637-37-8,
 Carbostyryl, thio- **2642-22-0**, Benzanilide,
 4'-mercapto-4-nitro- **2642-23-1**, p-Anisanilide,
 4'-mercapto- 2669-09-2, Acetamide, thio-, S-oxide 2741-06-2,
 Urea, 1-ethyl-3-phenyl-2-thio- 3855-24-1, 1,1-Cyclohexanedithiol
 3898-08-6, Urea, 1,1-diphenyl-2-thio- 4366-50-1, Urea,
 1-ethyl-1-(1-naphthyl)-2-thio- 4498-99-1, Methanethiol, p-tolyl-
 4685-99-8, Propionanilide, 2-iodo- 4845-58-3, 2-
Benzothiazolethiol, 6-nitro- 5332-52-5, 1-Undecanethiol
 5351-69-9, Semicarbazide, 4-phenyl-3-thio- 5395-94-8, Carbanilide,
 2,2'-diethylthio- 6601-20-3, Urea, 1,3-diallyl-2-thio-
 7340-69-4, 2-**Benzothiazolethiol**, 5,6-dimethoxy-
 7340-70-7, 2-**Benzothiazolethiol**, 6-acetamido- 7340-71-8,
 Propionamide, N-(2-mercapto-6-**benzothiazolyl**)-2-methyl-
 7340-74-1, 4H-1,3,4-Thiadiazine-2-thiol, 5,6-dihydro-4-phenyl-
 7340-97-8, 1,3,4-Thiadiazole-2-thiol, 5,5'-thiobis- 7340-98-9,
 4-Isothiazolecarbonitrile, 3,5-dimercapto- 7340-99-0, Potassium,
 [(cyanoimino)dithio]di- 7341-00-6, Sodium,
 [(carbamoylcyanovinylidene)dithio]di- 7341-01-7, Potassium,
 [(carboxycyanovinylidene)dithio]di-, ethyl ester 7341-17-5,
 1-Hexanethiol, 2-ethyl- 7341-24-4, Methanethiol, o-tolyl-
 7341-26-6, .alpha.-Toluenethiol, o-ethyl- 7341-27-7,
 .alpha.-Toluenethiol, p-ethyl- 7341-60-8, Benzophenone,
 thiosemicarbazone 7341-63-1, Urea, 1-allyl-3-phenyl-2-thio-
 7428-45-7, Dodecanamide, N-(2-mercapto-6-**benzothiazolyl**)-
 7442-07-1, 2-**Benzothiazolethiol**, 6-amino- 10059-13-9,
 2-Undecanethiol, 2-methyl- 15570-10-2, o-Toluenethiol,
 4-tert-butyl- 17931-26-9, Naphtho[2,1-d]thiazole-2-thiol
 18263-20-2, Benzanilide, thio-, S-oxide 25103-09-7, Isooctyl
 alcohol, mercaptoacetate 30374-01-7, Propionic acid, 3-mercapto-,
 isooctyl ester 38951-62-1, 1,3,4-Thiadiazolidine-2-thione,
 4-phenyl-

(photographic emulsion contg.)

IT 7782-49-2, Selenium

(photographic emulsions contg. org.)

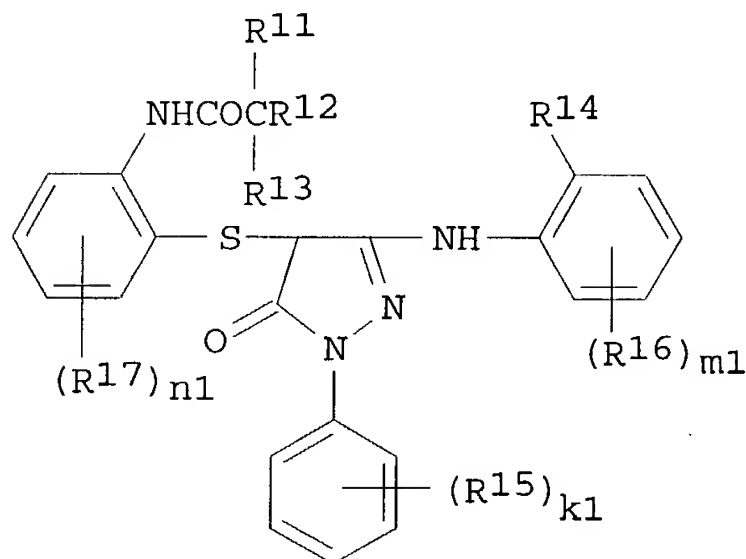
=> d 145 1-26 cbib abs hitstr hitind

L45 ANSWER 1 OF 26 HCA COPYRIGHT 2003 ACS

135:53458 **Silver halide color photographic**

light sensitive material. Ishige, Osamu; Kataoka, Emiko; Hoshino, Hiroyuki (Konica Corporation, Japan). Eur. Pat. Appl. EP 1109061 A1 20010620, 67 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2000-311233 20001215. PRIORITY: JP 1999-357501 19991216.

GI



I

AB The invention relates to **silver halide color photog.** light-sensitive materials exhibiting enhanced sensitivity, superior color-forming properties and improved storage stability. A **Ag halide color photog.** light sensitive material is disclosed, comprising a support having thereon a blue-sensitive **Ag halide** emulsion layer, a green-sensitive **Ag halide** emulsion layer and a red-sensitive **Ag halide** emulsion layers, wherein .gtoreq.1 of the **Ag halide** emulsion layers contains a coupler I (R11 = secondary alkyl, tertiary alkyl, cycloalkyl; R12 = aryloxy; R13 = H, alkyl, cycloalkyl, aryl, heterocycle; R14 = halo, alkyl; R15, R16, R17 = substituent; k1 = 0-5; m1, n1 = 0-4).

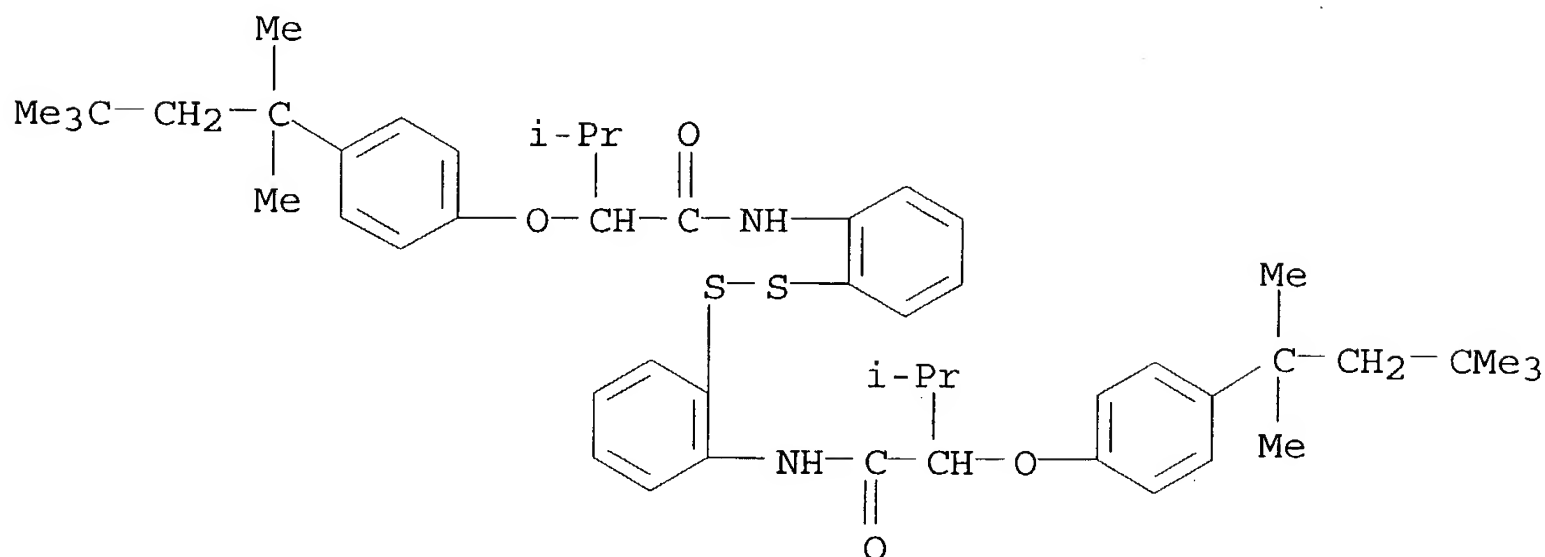
IT 373645-62-6

(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)

RN 373645-62-6 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[3-methyl-2-[4-(1,1,3,3-

tetramethylbutyl)phenoxy] - (9CI) (CA INDEX NAME)

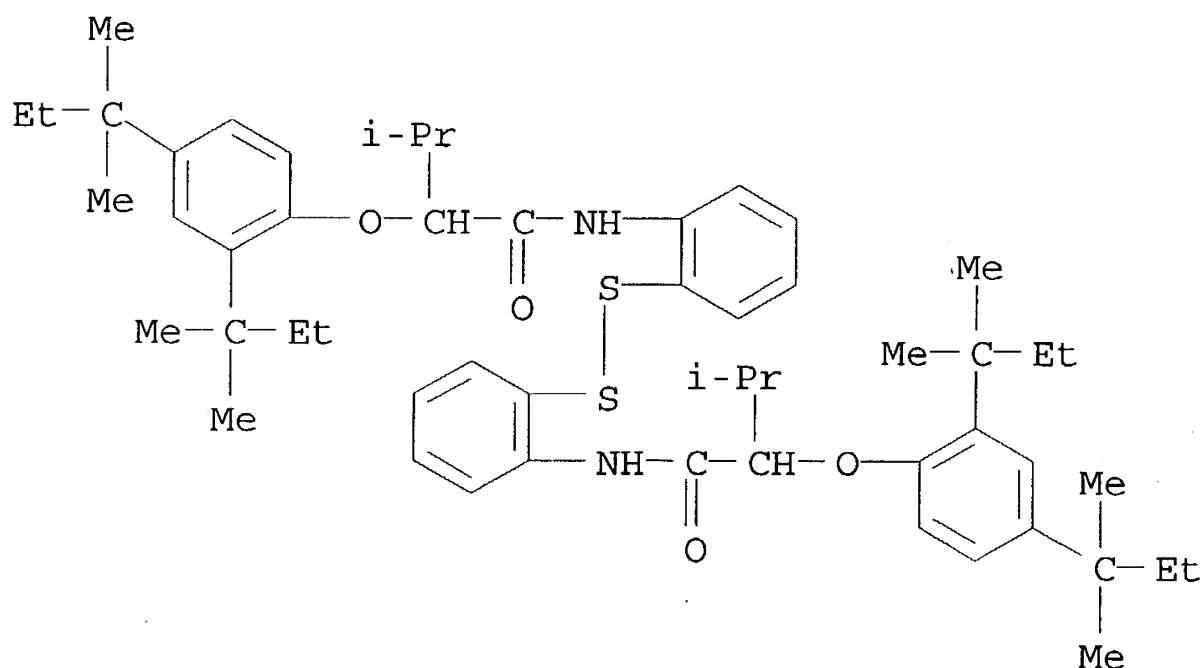


IT 344558-05-0P

(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)

RN 344558-05-0 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-3-methyl- (9CI) (CA INDEX NAME)



IC ICM G03C007-30

ICS G03C007-305; G03C007-384; G03C007-392

ICA C07D231-52

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **silver halide** color **photog** pyrazolone coupler

IT Magenta couplers

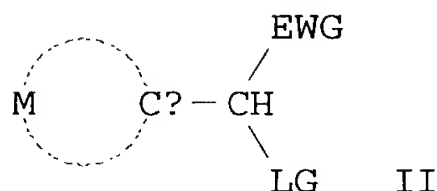
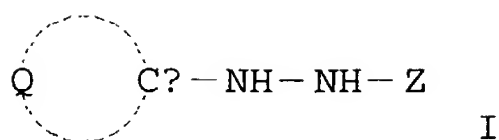
- (color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT **Photographic** films
(color; color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT **Photographic** couplers
(**development**-inhibitor-releasing; color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT **Photographic** couplers
(magenta; color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 373645-62-6
(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 344558-05-0P
(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 137-07-5, 2-Aminothiophenol 85204-35-9 344558-07-2
(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 1141-88-4P
(color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 373644-11-2 373645-55-7
(magenta coupler; color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)
- IT 344558-06-1P
(magenta coupler; color **photog.** film contg. pyrazolone magenta coupler for improving sensitivity, color forming properties, and storage stability)

L45 ANSWER 2 OF 26 HCA COPYRIGHT 2003 ACS

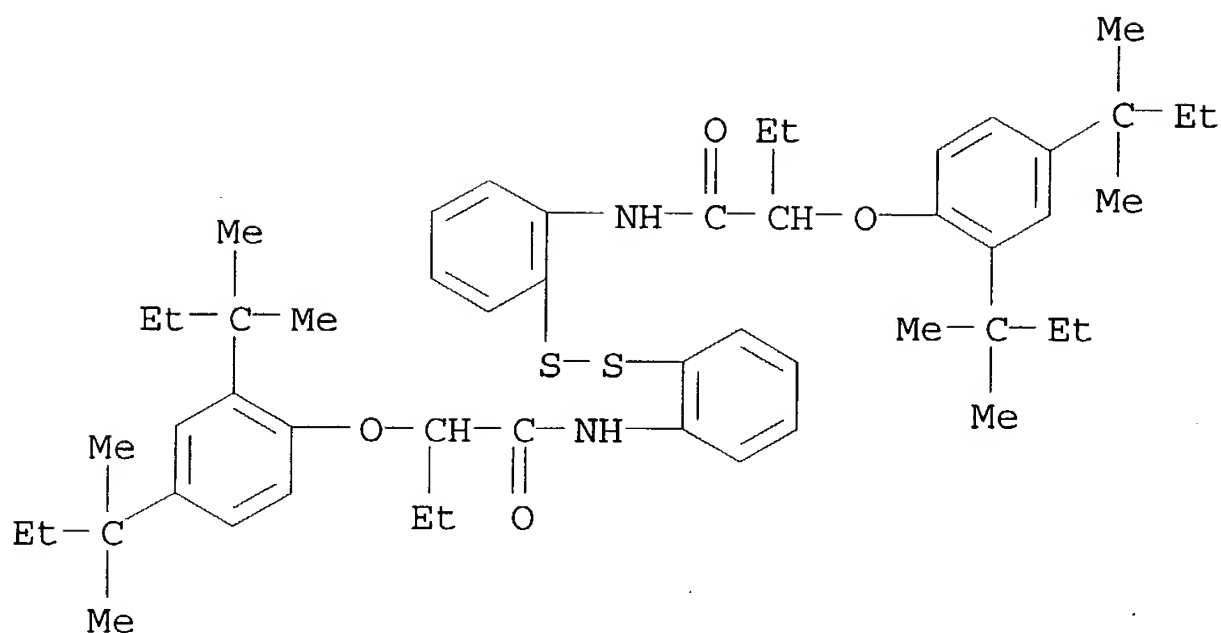
133:367807 **Silver halide** color **photographic**

material containing color **developer** and coupler and **image** formation. Uchida, Osamu; Ishiwata, Yasuhiro; Katsumata, Taiji (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000321733 A2 20001124, 46 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-127300 19990507.

GI



- AB The material comprises a support having thereon .gtoreq.1 hydrophilic colloid layer contg. .gtoreq.1 color **developer** I (C.alpha. = C; Z = carbamoyl, acyl, alkoxycarbonyl, aryloxycarbonyl; Q = atoms required to form an unsatd. ring with C.alpha.) and .gtoreq.1 coupler II (C.beta. = C; EWG = CN, carbamoyl, alkoxycarbonyl; LG = releasing group by coupling-reaction with **developer** oxidn. product; M = atoms required to form 6-membered arom. heterocyclic ring with C.beta.). **Images** are formed by (1) heat-**developing** the material; (2) **developing** it in the presence of alkali generated by slightly sol. metal salt and its complexing agent; or (3) **developing** it with an alk. **developer**. The material shows improved color **development**, providing **images** with improved light, heat, and humidity stability.
- IT 156146-01-9P
(prepn. of **photog.** yellow coupler)
- RN 156146-01-9 HCA
- CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



- IC ICM G03C007-32
ICS G03C001-42; G03C007-392; G03C007-407; G03C007-46
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST **photog** film **developer** coupler; heat
development photog film; alkali processing
photog film
- IT **Photographic** films
Yellow couplers
(**photog.** film contg. **developer** and coupler)
- IT 190184-77-1 192567-42-3 286011-21-0 307496-43-1 307496-44-2
307496-45-3 307496-47-5 307496-48-6 307496-49-7 307496-50-0
307496-51-1 307496-52-2 307496-53-3 307496-54-4
(**photog.** film contg. **developer** and coupler)
- IT 301335-97-7P 307496-46-4P
(**photog.** film contg. **developer** and coupler)
- IT 72802-02-9P 90110-85-3P 307496-55-5P
(prepn. of **photog.** **developer**)
- IT 302-01-2, Hydrazine, reactions 594-42-3 56406-50-9 61053-26-7
(prepn. of **photog.** **developer**)
- IT 30750-23-3P 156146-01-9P
(prepn. of **photog.** yellow coupler)
- IT 88-68-6, o-Aminobenzamide 105-56-6, Ethyl 2-cyanoacetate
1141-88-4 40567-16-6
(prepn. of **photog.** yellow coupler)

L45 ANSWER 3 OF 26 HCA COPYRIGHT 2003 ACS

126:96827 **Silver halide photographic**

element for printing plate and its high contrast **image**
formation method. Hanyu, Takeshi (Konishiroku Photo Ind, Japan).
Jpn. Kokai Tokkyo Koho JP 08286304 A2 19961101 Heisei, 22
pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-89514
19950414.

AB The **Ag halide photog.** element comprises a support, successively laminated with a hydrophilic colloid layer contg. a diffusion-resistant disulfide compd., a **Ag halide** emulsion layer, and an emulsion protection layer. The **Ag halide** emulsion layer may comprise (a) a halogen grain with **AgCl** content .gtoreq.60 mol.% and sensitized with a merocyanine or a cyanine dye, (b) a hydrazine or a tetrazolium, and optionally (c) a nucleating accelerator, preferably a latex. The **photog.** element may have .gtoreq.2 **Ag halide** emulsion layers with different sensitivity and contg. $1 \cdot \text{times} \cdot 10^{-6}$ - $1 \cdot \text{times} \cdot 10^{-3}$ mol (for 1 mol Ag) .gtoreq.1 metal selected from Ir, Rh, Os, and Ru and optionally hydroquinone monosulfonate and a layer contg. a diffusion-resistant disulfide and an UV absorber with λ_{max} 300-400 nm and contacting with the emulsion layer arranged in the lowest part. A **developer** contg. ascorbic acid or its precursor and free of hydroquinone is used in the **image** formation method. The **photog.** element shows improved sensitivity, pressure resistance, and storage stability.

IT 173609-95-5

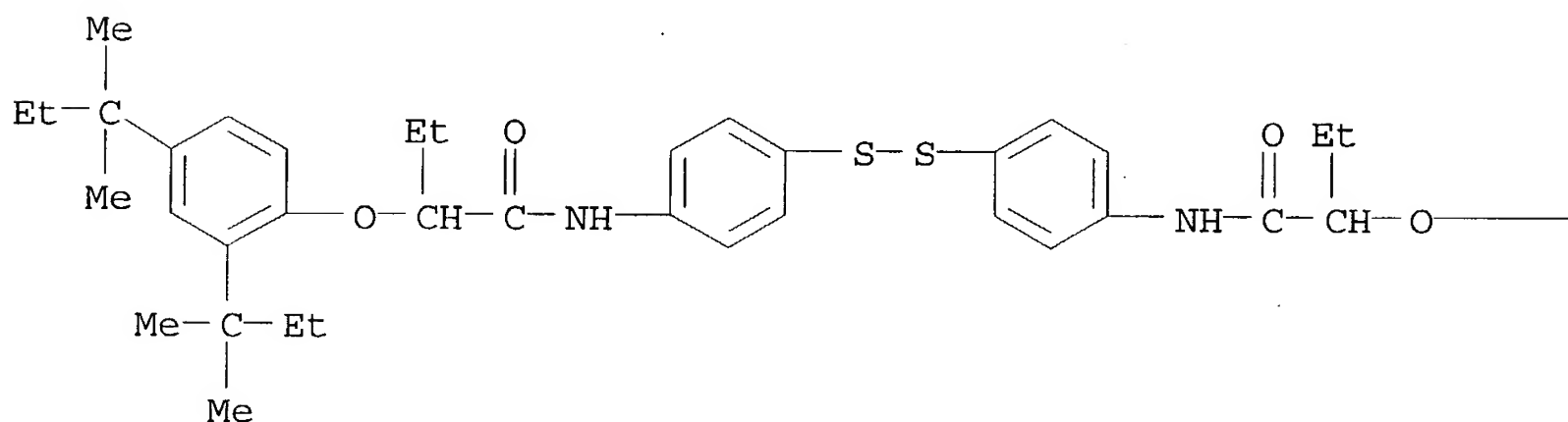
(in colloid layer; **Ag halide photog**

. element contg. disulfide for printing plate and its high contrast **image** formation method)

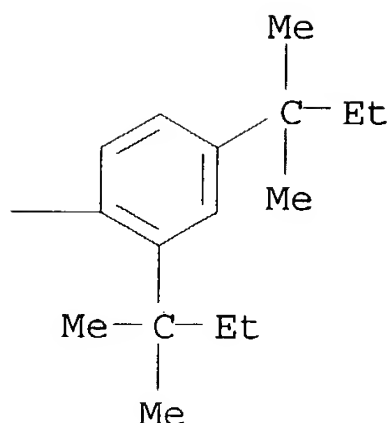
RN 173609-95-5 HCA

CN Butanamide, N,N'-(dithiodi-4,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM G03C001-06
ICS G03C001-06; G03C001-035; G03C001-09; G03C001-12; G03C001-295;
G03C001-42; G03C001-46; G03C001-815; G03C005-29
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST **silver halide photog** element printing
plate; sulfide diffusion resistance **silver halide
photog**
- IT **Photographic development**
Photographic plates
(**Ag halide photog.** element contg.
disulfide for printing plate and its high contrast **image**
formation method)
- IT Onium compounds
(tetrazolium; **Ag halide photog.**
element contg. disulfide for printing plate and its high contrast
image formation method)
- IT 86551-61-3 180305-19-5
(**Ag halide photog.** element contg.
disulfide for printing plate and its high contrast **image**
formation method)
- IT 17438-29-8, Hydroquinone monosulfonate
(**Ag halide photog.** element contg.
disulfide for printing plate and its high contrast **image**
formation method)
- IT 25189-68-8, 2-Hydroxy-4-(methacryloyloxyethoxy)benzophenone-methyl
methacrylate copolymer
(UV absorber; **Ag halide photog.**
element contg. disulfide for printing plate and its high contrast
image formation method)
- IT 89-65-6, Isoascorbic acid
(**developer**; **Ag halide
photog.** element contg. disulfide for printing plate and
its high contrast **image** formation method)
- IT 7439-88-5, Iridium, uses 7440-04-2, Osmium, uses 7440-16-6,
Rhodium, uses 7440-18-8, Ruthenium, uses
(dopant; **Ag halide photog.** element

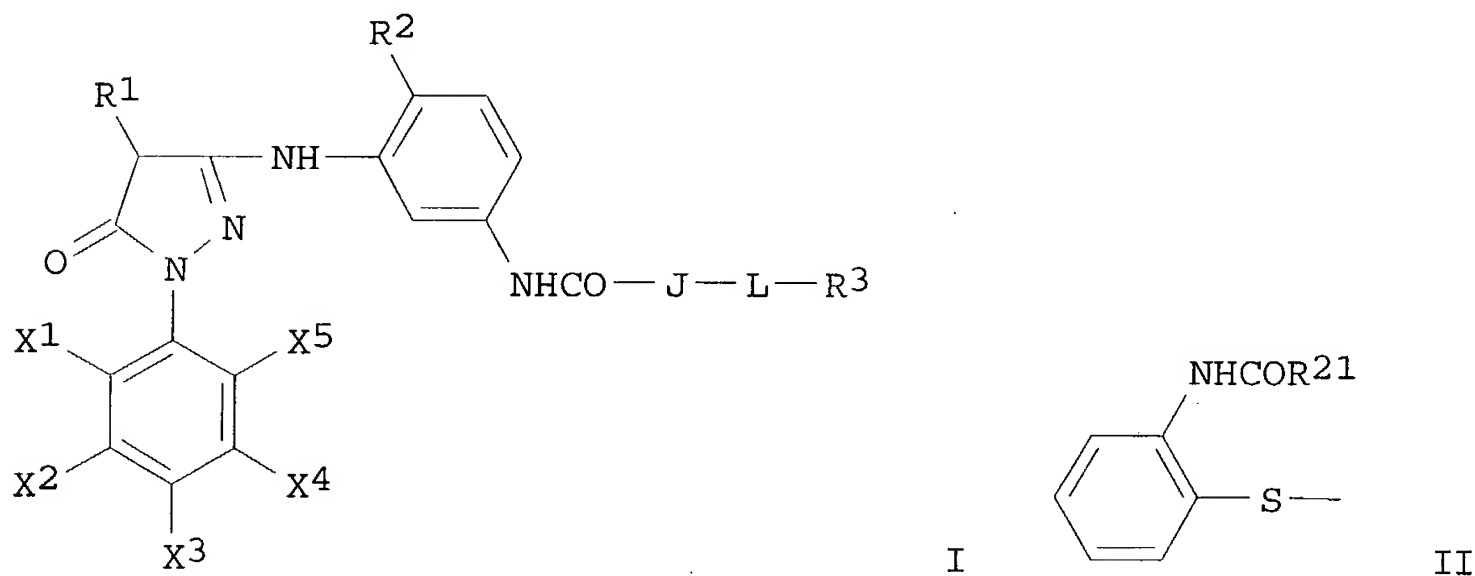
contg. disulfide for printing plate and its high contrast **image** formation method)

- IT 173609-95-5 185538-97-0 185539-02-0 185539-05-3
 (in colloid layer; **Ag halide photog**
 . element contg. disulfide for printing plate and its high
 contrast **image** formation method)
- IT 185539-09-7
 (nucleating agent; **Ag halide photog**
 . element contg. disulfide for printing plate and its high
 contrast **image** formation method)

L45 ANSWER 4 OF 26 HCA COPYRIGHT 2003 ACS

126:82143 **Silver halide color photographic**
 photosensitive material. Suzuki, Takashi; Tanaka, Mari (Konishiroku
 Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08278614 A2
 19961022 Heisei, 24 pp. (Japanese). CODEN: JKXXAF.
 APPLICATION: JP 1995-82626 19950407.

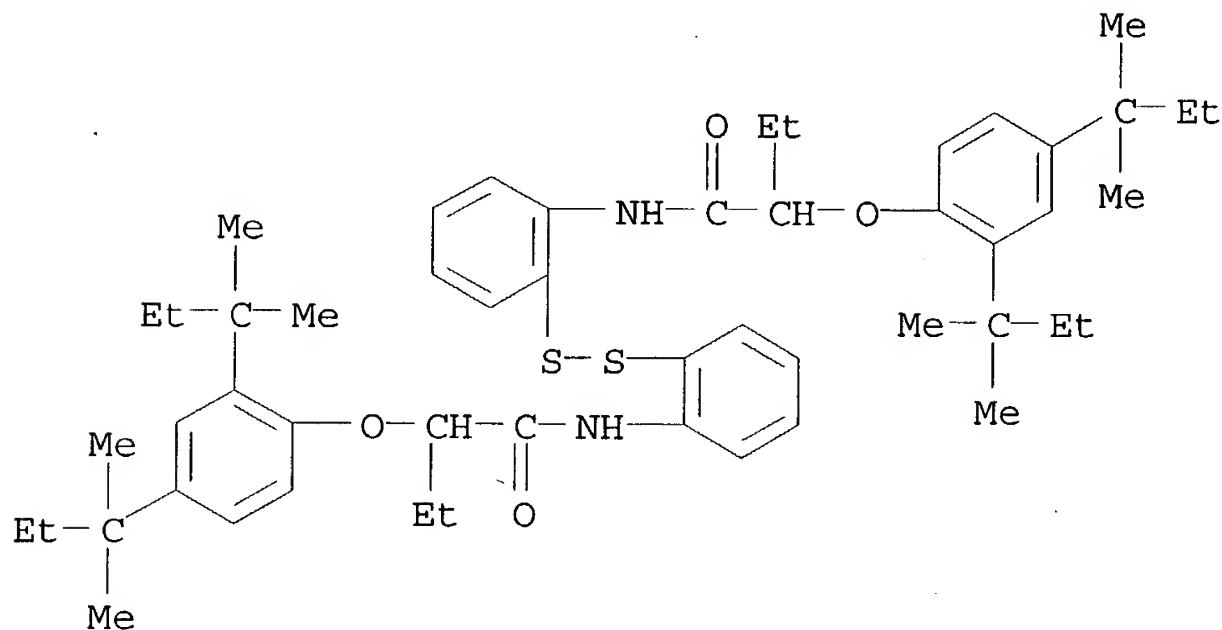
GI



- AB The material comprises a support, and red-, green-, and red-sensitive **Ag halide** emulsion layers, contains a magenta coupler I [R1 = group released by reaction with oxidized **developing** agent; R2 = Cl, alkoxy group; J = divalent or trivalent alkylene or arylene; L = -NHSO2-, -SO2NH,-; R3 = alkyl, aryl; total C no. of J and R3 .ltoreq.10; X1, X2, X3, X4, X5 = F, Cl, Br, I]. R1 may be arylthio group, II (R21 = substitution group). The material shows high sensitivity and gives high-d. color, excellent color reproducibility, and log fog **images**.

- IT 156146-01-9
 (in manuf. of magenta coupler for **silver halide**
 color **photog.** photosensitive material)

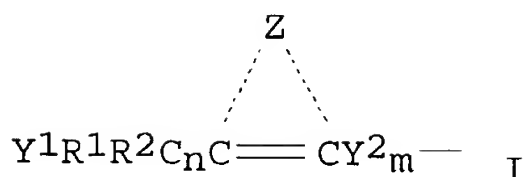
RN 156146-01-9 HCA
 CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-(9CI) (CA INDEX NAME)



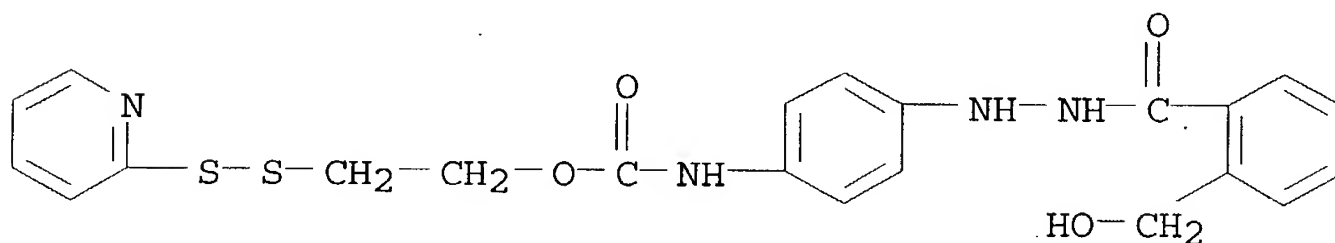
IC ICM G03C007-384
 ICS G03C007-00
 CC 74-2 (Radiation Chemistry, Photochemistry, and
 Photographic and Other Reprographic Processes)
 ST **silver halide photog** magenta coupler
 IT Magenta couplers
 (silver halide color photog.
 photosensitive material)
 IT 153070-75-8P 184896-92-2P 184896-93-3P
 (in manuf. of magenta coupler for **silver halide**
 color **photog.** photosensitive material)
 IT 28547-13-9 156146-01-9
 (in manuf. of magenta coupler for **silver halide**
 color **photog.** photosensitive material)
 IT 184896-88-6P
 (magenta coupler; **silver halide** color
photog. photosensitive material)
 IT 184896-86-4 184896-87-5 184896-89-7 184896-90-0 184896-91-1
 (magenta coupler; **silver halide** color
photog. photosensitive material)

L45 ANSWER 5 OF 26 HCA COPYRIGHT 2003 ACS
 125:288707 **Silver halide photographic**
 materials containing hydrazine DIR compound for **image**
 formation. Miura, Akio; Yamada, Taketoshi; Kato, Katsunori
 (Konishiroku Photo Ind., Japan). Jpn. Kokai Tokkyo Koho JP 08201958
 A2 19960809 Heisei, 24 pp. (Japanese). CODEN: JKXXAF.
 APPLICATION: JP 1995-9000 19950124.

GI

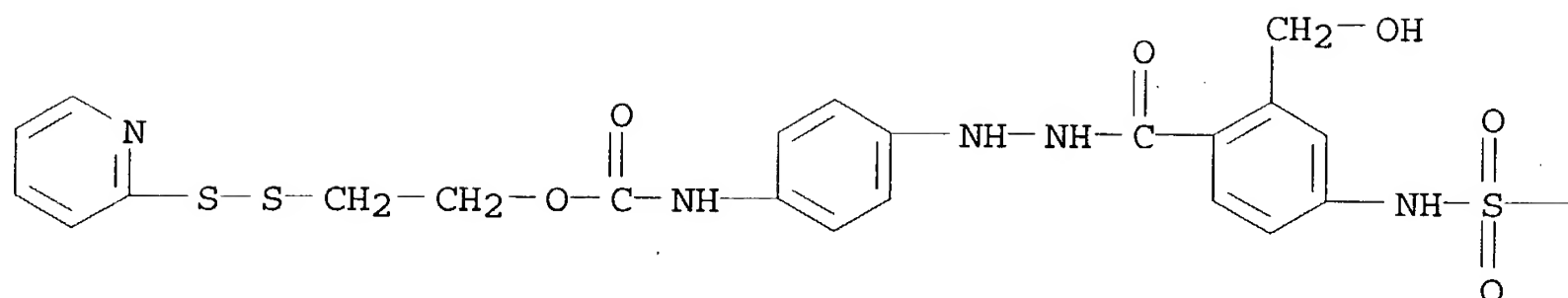


- AB The **photog.** materials contain hydrazine DIR compd. XCONA1NA2(INH) (X has functional group to release XCO in the presence of **developer** oxide and form XCO-contg. ring; A1-2 = H, or one is H and the other is alkylsulfonyl, arylsulfonyl, acyl; INH = monovalent **development** inhibitor group). The substituent X may be represented by the structure I (Z = at. group to form 5- or 6-membered ring; R1-2 = H, alkyl, aryl; n = 0-2; Y1 = OH, SH, NHR3; R3 = H, alkyl, aryl; Y2 = bivalent linkage with 1-2 atom(s) in main chain). The **photog.** materials contain a hydrazine deriv. other than the DIR compd. They are processed with a low-pH **developer** (pH .ltoreq.11). They give high-contrast **images** with wide halftone gradation.
- IT 182480-84-8 182480-87-1 182480-89-3
182480-91-7
(DIR compds.; **silver halide photog.** materials contg. hydrazine DIR compd. for wide halftone gradation and their processing)
- RN 182480-84-8 HCA
- CN Benzoic acid, 2-(hydroxymethyl)-, 2-[4-[[[2-(2-pyridinyldithio)ethoxy]carbonyl]amino]phenyl]hydrazide (9CI) (CA INDEX NAME)

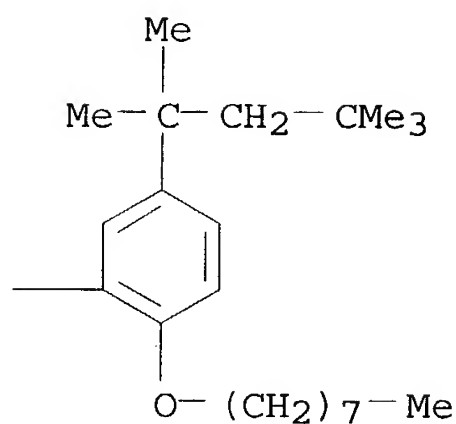


- RN 182480-87-1 HCA
- CN Benzoic acid, 2-(hydroxymethyl)-4-[[[2-(octyloxy)-5-(1,1,3,3-tetramethylbutyl)phenyl]sulfonyl]amino]-, 2-[4-[[[2-(2-pyridinyldithio)ethoxy]carbonyl]amino]phenyl]hydrazide (9CI) (CA INDEX NAME)

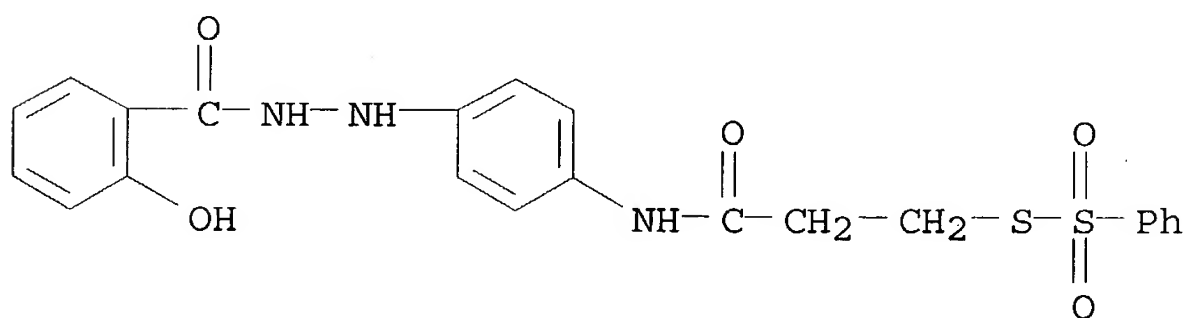
PAGE 1-A



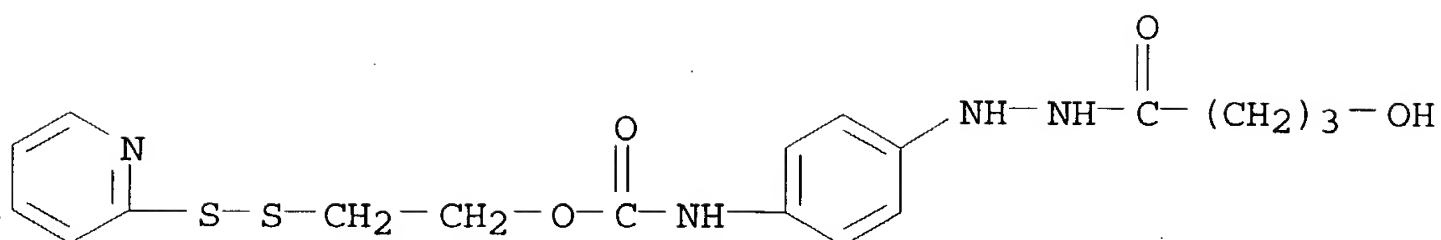
PAGE 1-B



RN 182480-89-3 HCA
 CN Benzoic acid, 2-hydroxy-, 2-[4-[[[1-oxo-3-
 [(phenylsulfonyl)thio]propyl]amino]phenyl]hydrazide (9CI) (CA INDEX
 NAME)



RN 182480-91-7 HCA
 CN Butanoic acid, 4-hydroxy-, 2-[4-[[[2-(2-
 pyridinyldithio)ethoxy]carbonyl]amino]phenyl]hydrazide (9CI) (CA
 INDEX NAME)

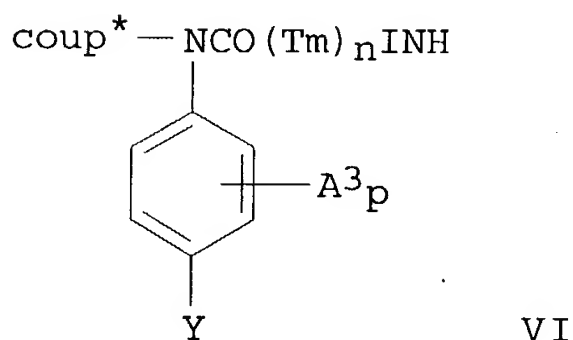
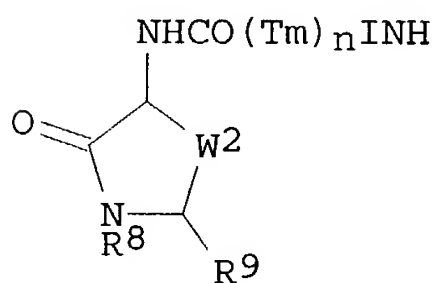
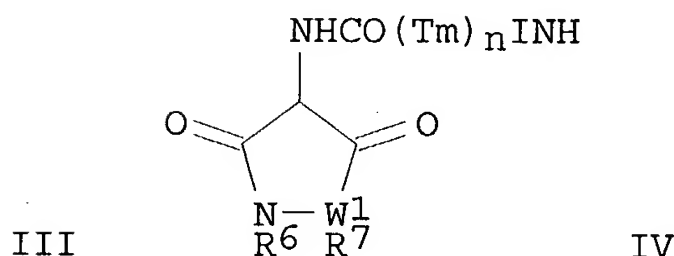
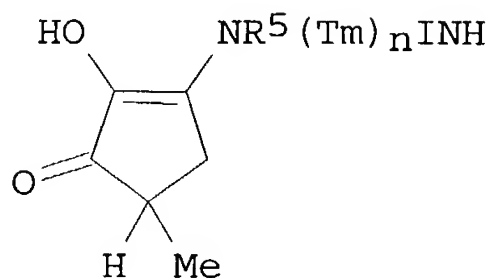
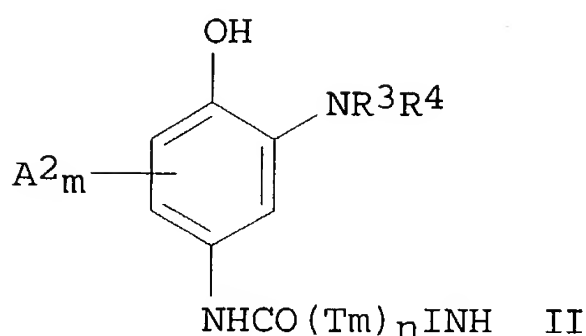
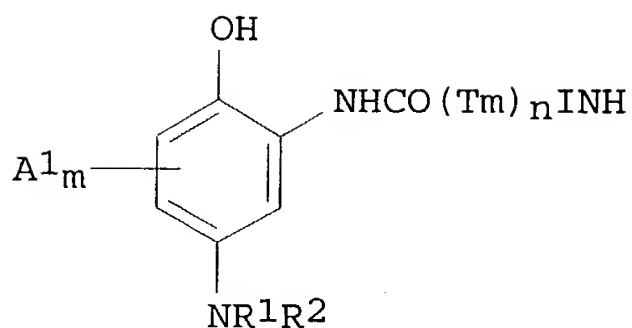


- IC ICM G03C001-43
ICS G03C001-06
- CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **silver halide photog** hydrazine DIR;
development inhibitor releasing hydrazine **photog**
- IT **Photographic development**
(with low-pH **developers**; **silver halide photog.** materials contg. hydrazine DIR compd. for wide halftone gradation and their processing)
- IT **Photographic couplers**
(**development**-inhibitor-releasing, **silver halide photog.** materials contg. hydrazine DIR compd. for wide halftone gradation and their processing)
- IT 182480-85-9P 182480-88-2P 182480-90-6P
(DIR compds.; **silver halide photog.** materials contg. hydrazine DIR compd. for wide halftone gradation and their processing)
- IT 182480-84-8 182480-86-0 182480-87-1
182480-89-3 182480-91-7 182480-92-8
(DIR compds.; **silver halide photog.** materials contg. hydrazine DIR compd. for wide halftone gradation and their processing)
- IT 124013-75-8 146177-68-6 168404-05-5
(nucleating agents; **silver halide photog.** materials contg. hydrazine DIR compd. for wide halftone gradation and their processing)

L45 ANSWER 6 OF 26 HCA COPYRIGHT 2003 ACS

125:288701 **Silver halide photographic** materials containing **development**-inhibitor-releasing (DIR) compounds and **image** formation. Miura, Akio; Komamura, Tawara; Yamada, Taketoshi (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08194281 A2 19960730 Heisei, 27 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-4957 19950117.

GI



AB The **photog.** materials contain the compd. I (R1-2 = H, alkyl, aryl, heterocycle; A1 = substituent of benzene ring; m = 0-3; Tm = timing group; n = 0, 1; INH = **development** inhibitor group), II (R3-4 = H, alkyl, aryl, heterocycle; A2 = substituent of benzene ring; m = 0-3; Tm = timing group; n = 0, 1; INH = **development** inhibitor group), III (R5 = H, alkyl, aryl, heterocycle; Tm = timing group; n = 0, 1; INH = **development** inhibitor group), IV (R6-7 = H, alkyl, aryl, heterocycle; W1 = CN, N; Tm = timing group; n = 0, 1; INH = **development** inhibitor group), V (R8-9 = H, alkyl, aryl, heterocycle; W2 = S, SO, SO2; Tm = timing group; n = 0, 1; INH = **development** inhibitor group) or VI (A3 = substituent of benzene ring; p = 0-4; Y = R10R11, OH; R10-11 = H, alkyl, aryl, heterocycle; COUP = coupler group for coupling with arom. primary amine **developer** oxide; * = coupling position). The **photog.** materials preferably contain a hydrazine compd. The **photog.** materials are **developed** with a low-pH **developer** (pH .ltoreq.11). The **photog.** materials provide high-contrast **images** and have a wide halftone gradation.

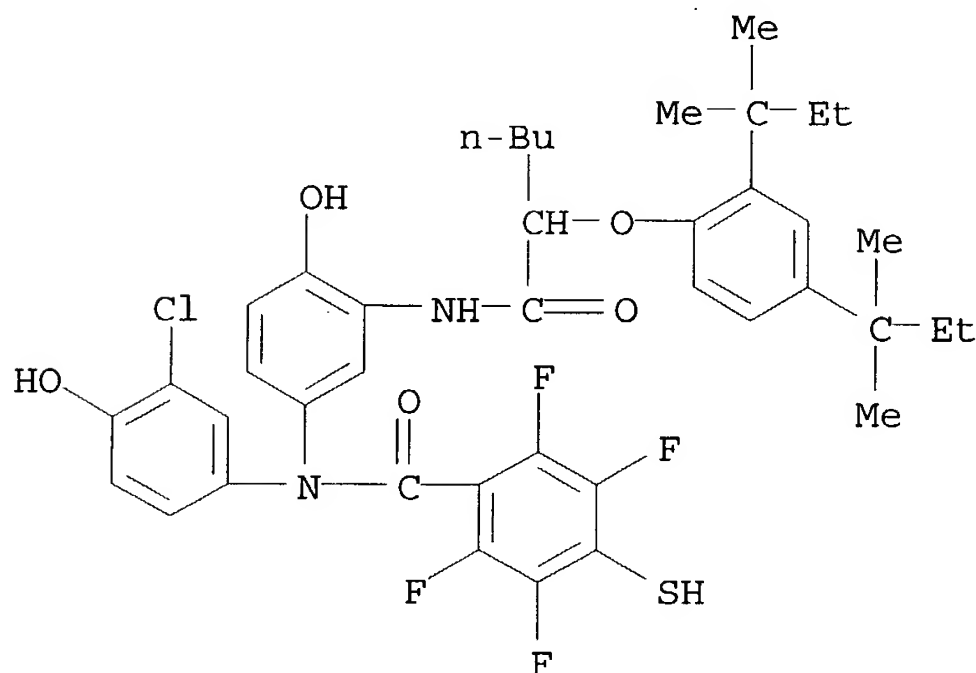
IT 182560-40-3

(**development**-inhibitor-releasing compds.;

silver halide photog. materials
 contg. **development-inhibitor-releasing compds. and**
image formation)

RN 182560-40-3 HCA

CN Benzamide, N-[3-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-4-hydroxyphenyl]-N-(3-chloro-4-hydroxyphenyl)-2,3,5,6-tetrafluoro-4-mercapto- (9CI) (CA INDEX NAME)



IC ICM G03C001-43

ICS G03C001-06; G03C005-29

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **silver halide photog**
development inhibitor releasing

IT **Photographic development**
 (by low-pH **developers; silver halide**
photog. materials contg. **development**
-inhibitor-releasing compds. and image formation)

IT **Photographic couplers**
 (**development-inhibitor-releasing, silver**
halide photog. materials contg.
development-inhibitor-releasing compds. and image
formation)

IT 177097-77-7P 182560-26-5P 182560-32-3P 182560-35-6P
 (**development-inhibitor-releasing compds.;**
silver halide photog. materials
 contg. **development-inhibitor-releasing compds. and**
image formation)

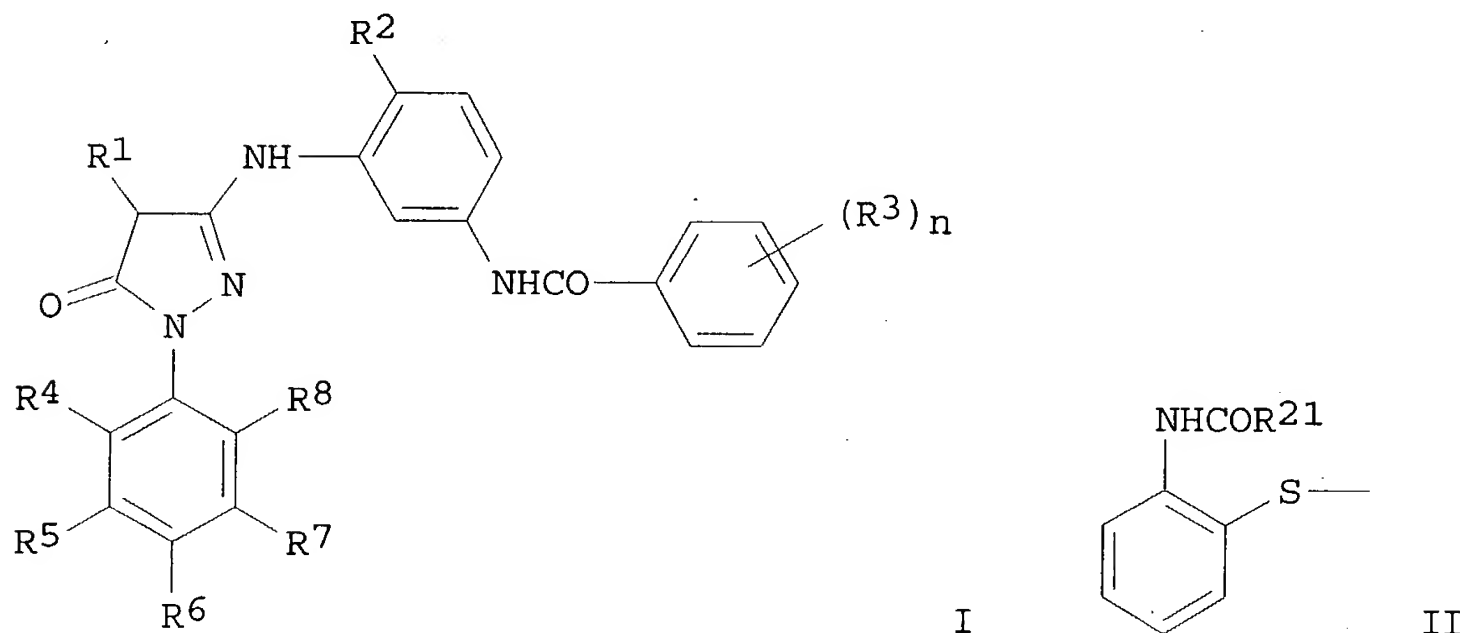
IT 182560-22-1 182560-24-3 182560-28-7 182560-30-1 182560-33-4
 182560-34-5 182560-37-8D, deriv 182560-39-0 182560-40-3
 (**development-inhibitor-releasing compds.;**
silver halide photog. materials
 contg. **development-inhibitor-releasing compds. and**

image formation)

IT 124013-75-8 168404-05-5 174642-75-2
(silver halide photog. materials
contg. development-inhibitor-releasing compds. and
image formation)

L45 ANSWER 7 OF 26 HCA COPYRIGHT 2003 ACS
125:208344 **Silver halide color photographic**
material. Tanaka, Mari; Kaneko, Manabu; Nagato, Michiko
(Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08171186
A2 19960702 Heisei, 23 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1994-312077 19941215.

GI

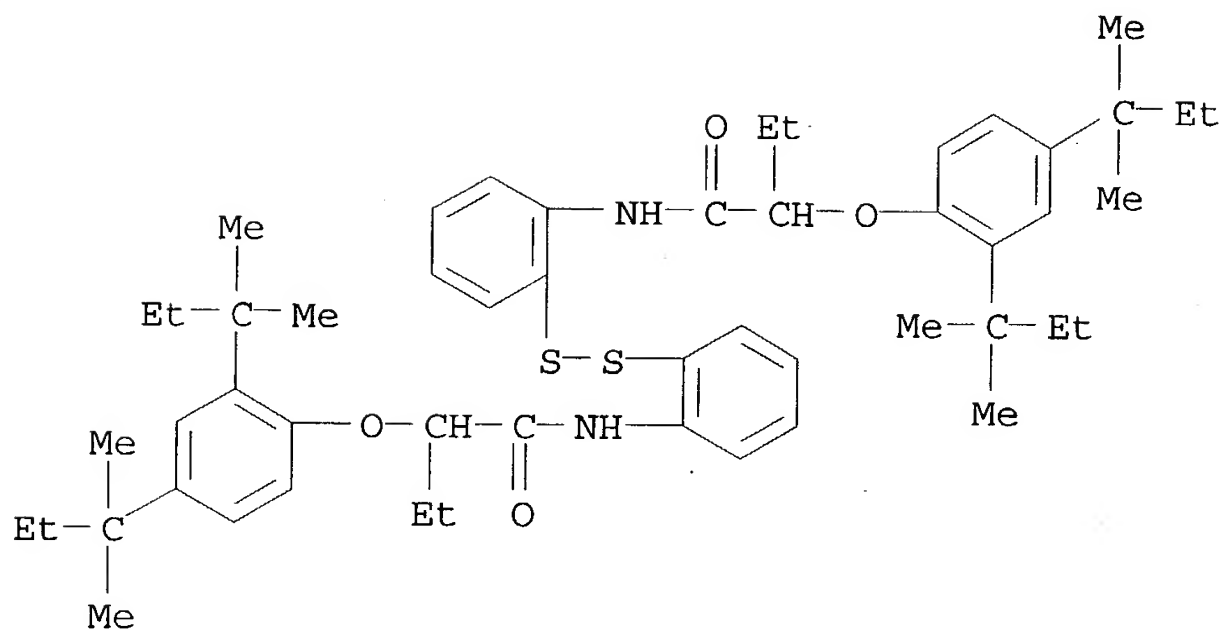


AB The material contains a magenta coupler I (R1 = H, a group eliminating by reaction with an oxidized developer; R2 = Cl, alkoxy; R3 = a substituent; n = 1-5; R4-8 = halo) in 1 of Ag halide emulsion layers on a support. The material, contg. I where R1 = arylthio, is also claimed. The material, contg. I where 1 of R3 substituting at the ortho position toward NHCO, is also claimed. The material, contg. I where R4-8 = Cl, is also claimed. The material, contg. I where R1 being II (R21 = a substituent), is also claimed. The material shows high sensitivity and good color reproducibility.

IT 156146-01-9P
(in prepn. of magenta coupler for silver halide
color photog. material)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



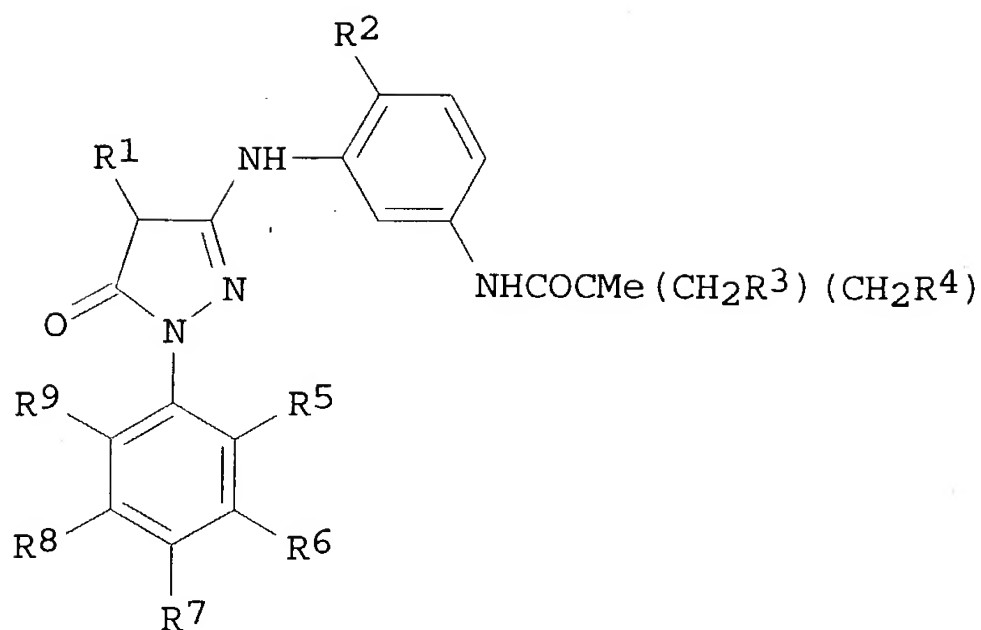
- IC ICM G03C007-384
ICS G03C007-00; G03C007-26
- CC **74-2** (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
Section cross-reference(s): 25
- ST **silver halide color photog** coupler
magenta
- IT **Photographic** couplers
(**silver halide color photog.**
material)
- IT 181305-10-2P
(emulsion layer; prepn. of magenta coupler for **silver
halide color photog.** material)
- IT 181305-11-3 181305-12-4 181305-13-5 181305-14-6 181305-15-7
181305-16-8 181305-17-9
(emulsion layer; prepn. of magenta coupler for **silver
halide color photog.** material)
- IT 155124-15-5, **Silver bromide iodide**
(emulsion layer; **silver halide color
photog.** material)
- IT 4659-45-4P 153070-75-8P **156146-01-9P** 181305-09-9P
(in prepn. of magenta coupler for **silver halide
color photog.** material)
- IT 50-30-6, 2,6-Dichlorobenzoic acid 7719-09-7, Thionyl chloride
(in prepn. of magenta coupler for **silver halide
color photog.** material)

L45 ANSWER 8 OF 26 HCA COPYRIGHT 2003 ACS

125:181149 **Silver halide color photographic**

materials for high color sensitivity. Kaneko, Manabu; Tanaka, Mari;
Nagato, Michiko (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo
Koho JP 08160583 A2 **19960621** Heisei, 21 pp. (Japanese).
CODEN: JKXXAF. APPLICATION: JP 1994-307644 19941212.

GI



I

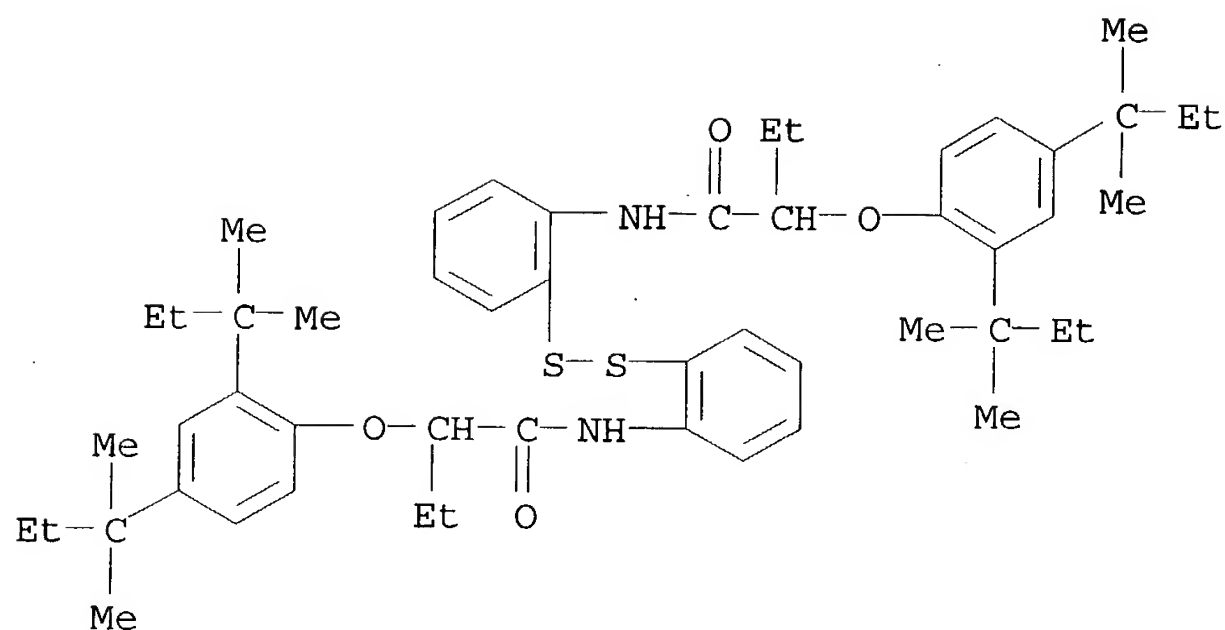
AB The title materials having a blue-sensitive **Ag halide** emulsion layer, a green-sensitive **Ag halide** emulsion layer, and a red-sensitive **Ag halide** emulsion layer contain the coupler I ($R_1 = H$, leaving group by coupling with oxide of color **developer**; $R_2 = Cl$, alkoxy; $R_3-4 = H$, substituent; $R_5-9 = halo$; $R_3 = R_4$.noteq. H , e.g., R_3 and/or $R_4 = OR_{10}$, $OOCR_{11}$; $R_{10} = H$, alkyl, aryl; $R_{11} = alkyl$, aryl) in the green-sensitive emulsion layer. The coupler gives thin-film **photog.** materials.

IT 156146-01-9

(magenta couplers for thin-film **photog.** materials with high color sensitivity)

RN 156146-01-9 HCA

CN Butanamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy] - (9CI) (CA INDEX NAME)



IC ICM G03C007-384
ICS G03C007-00
CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
ST magenta coupler **silver halide photog**
IT **Photographic** couplers
(magenta couplers for thin-film **photog.** materials with
high color sensitivity)
IT 180890-03-3P
(magenta couplers for thin-film **photog.** materials with
high color sensitivity)
IT 156146-01-9 180890-16-8
(magenta couplers for thin-film **photog.** materials with
high color sensitivity)
IT 180890-04-4 180890-05-5 180890-06-6 180890-07-7 180890-08-8
180890-09-9 180890-10-2 180890-11-3 180890-12-4 180890-13-5
180890-14-6 180890-15-7
(magenta couplers for thin-film **photog.** materials with
high color sensitivity)

L45 ANSWER 9 OF 26 HCA COPYRIGHT 2003 ACS

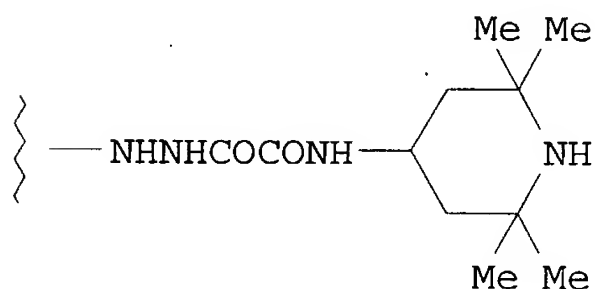
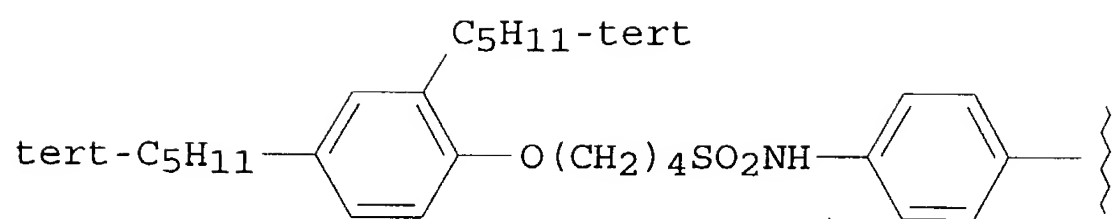
123:241890 **Silver halide photographic**

materials useful for platemaking. Ishikawa, Wataru (Konishiroku
Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 07159916 A2

19950623 Heisei, 20 pp. (Japanese). CODEN: JKXXAF.

APPLICATION: JP 1993-306759 19931207.

GI



I.

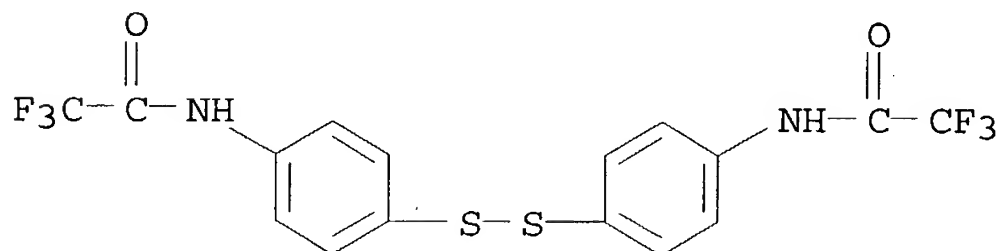
AB The title materials, contg. .gtoreq.1 hydrazine deriv. in the **Ag halide** emulsion layer and/or hydrophilic colloid layer, contain a compd. R1X1X2R2 [R1, R2 = (substituted) alkyl, (substituted) aryl; X1, X2 = S, Se, Te; R1, R2, X1, and X2 may form a ring]. The materials provide high-contrast and high-resoln. **images** without black spots even if processed continuously with **developing** solns. of pH less than 11.0. Thus, a **photog.** film was prepd. by using a Ag(Br,Cl) emulsion contg. a hydrazine deriv. (I) and (PhS)2.

IT 131042-42-7 168771-74-2

(**photog.** film contg. hydrazine deriv. and sulfur or selenium or tellurium compd.)

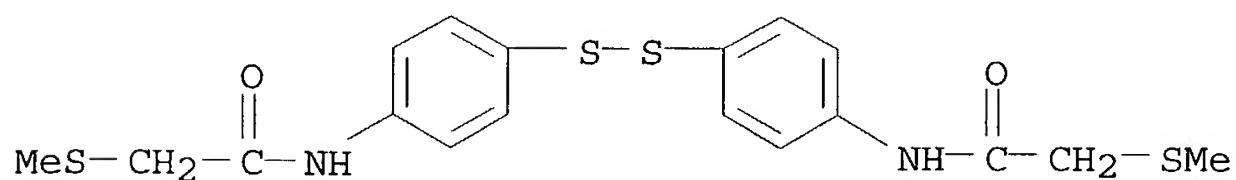
RN 131042-42-7 HCA

CN Acetamide, N,N'-(dithiodi-4,1-phenylene)bis[2,2,2-trifluoro- (9CI)
(CA INDEX NAME)

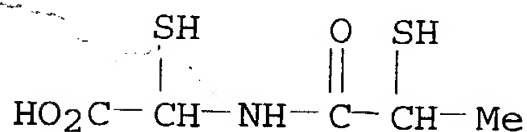


RN 168771-74-2 HCA

CN Acetamide, N,N'-(dithiodi-4,1-phenylene)bis[2-(methylthio)- (9CI)
(CA INDEX NAME)



- IC ICM G03C001-06
ICS G03C001-33
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST hydrazine deriv **photog** material; sulfur selenium tellurium
compd **photog**
- IT **Photographic** films
(**photog.** film contg. hydrazine deriv. and sulfur or
selenium or tellurium compd.)
- IT 882-33-7 5718-98-9 14091-99-7, 1,2-Dithiane-4-carboxylic acid
16766-10-2 112047-23-1 124013-74-7 131042-42-7
163427-78-9 168771-73-1 168771-74-2
(**photog.** film contg. hydrazine deriv. and sulfur or
selenium or tellurium compd.)
- L45 ANSWER 10 OF 26 HCA COPYRIGHT 2003 ACS
123:241867 Fixing solution for **silver halide**
photographic materials. Tsukada, Kazuya (Konishiroku Photo
Ind, Japan). Jpn. Kokai Tokkyo Koho JP 07159946 A2 19950623
Heisei, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
1993-309399 19931209.
- AB The title fixing soln. contains .gtoreq.1 compd. M1SCR1R2LnCR3R4SM2
[R1-4 = H, (substituted) alkyl, CO2H; L = (substituted) alkylene or
alkenyl, divalent group comprising .gtoreq.1 of O, CONH, CO, and CS;
M1, M2 = H, alkali metal, acyl, amidino, thiocarbamoyl]. The soln.
provides high quality **images** without residual Ag and color
even if large nos. of **photog.** films are processed with the
soln. by using automatic **developing** machines at a low
replenishment rate. Thus, [HSCH(CO2H)]2 was used typically for the
compd.
- IT 168325-21-1
(**photog.** fixing soln. contg. mercapto compd.)
- RN 168325-21-1 HCA
- CN Acetic acid, mercapto[(2-mercapto-1-oxopropyl)amino]- (9CI) (CA
INDEX NAME)



- IC ICM G03C005-38
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST mercapto compd fixing soln **photog**
- IT **Photographic** processing
(**photog.** fixing soln. contg. mercapto compd.)
- IT 59-52-9 540-63-6, 1,2-Ethanedithiol 2150-02-9 2418-14-6
4076-02-2 5139-01-5 6943-65-3 7634-42-6 17148-96-8,
Ethanebis(thioic) acid 58428-97-0 88496-83-7,
1,2,3,4-Butanetetraethiol 168325-20-0 168325-21-1

(photog. fixing soln. contg. mercapto compd.)

L45 ANSWER 11 OF 26 HCA COPYRIGHT 2003 ACS

122:226649 **Silver halide photographic**

material. Ogyama, Katsushi; Ooki, Nobutaka; Matsumoto, Keisuke
 (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 06258791
 A2 19940916 Heisei, 61 pp. (Japanese). CODEN: JKXXAF.
 APPLICATION: JP 1993-65987 19930303.

AB In the title **photog.** material having .gtoreq.1
 photosensitive **Ag halide** emulsion layers on its
 support, a compd. which contains an N-contg. heterocyclic group and
 will release an alkylthio-contg. bleaching assistant on reaction
 with an oxidized **developing** agent is contained. This
 material requires less bleaching time.

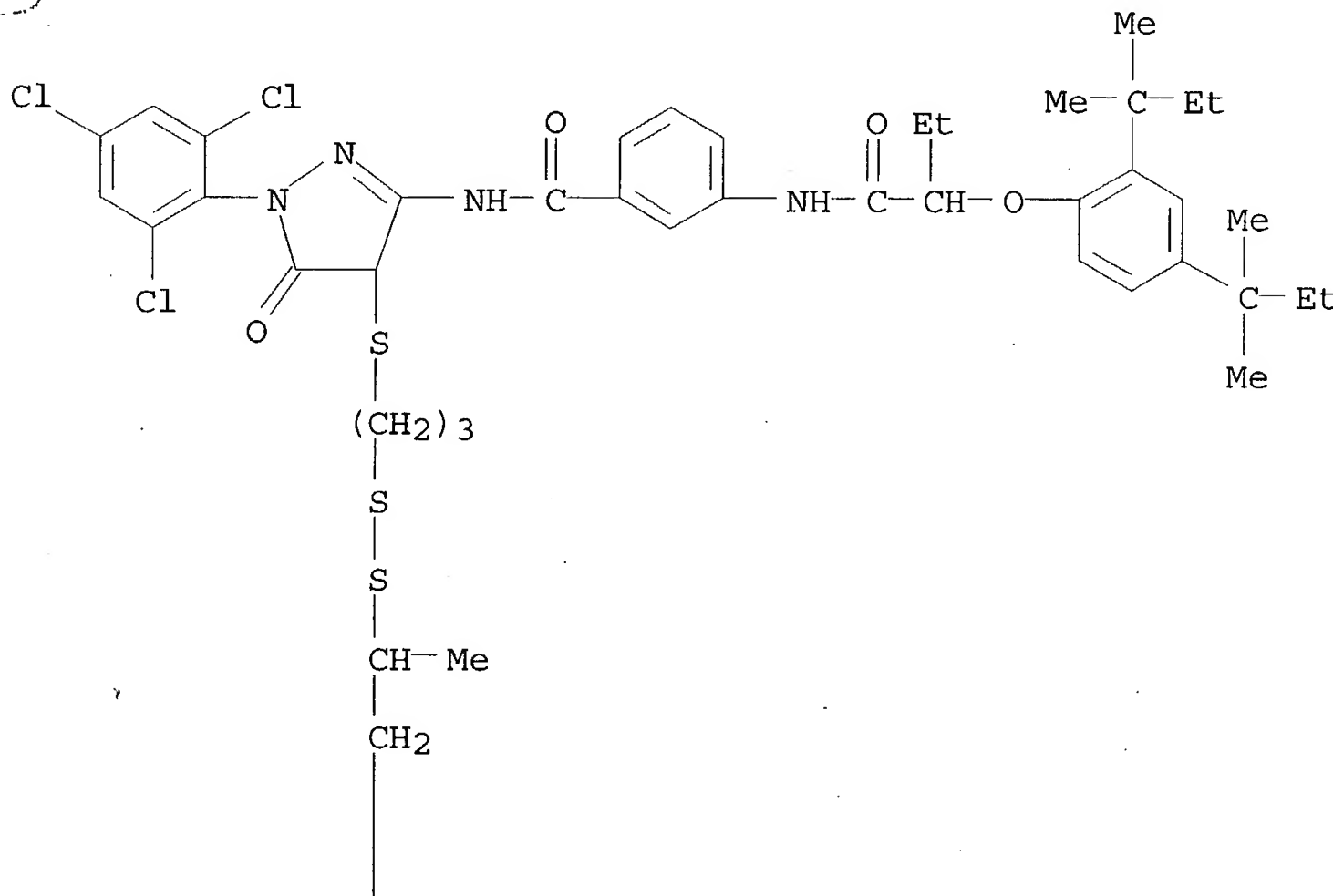
IT 162244-85-1

(photog. bleaching assistant-releasing compd.)

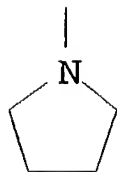
RN 162244-85-1 HCA

CN Benzamide, 3-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-
 oxobutyl]amino]-N-[4,5-dihydro-4-[[3-[[1-methyl-2-(1-
 pyrrolidinyl)ethyl]dithio]propyl]thio]-5-oxo-1-(2,4,6-
 trichlorophenyl)-1H-pyrazol-3-yl]- (9CI) (CA INDEX NAME)

PAGE 1-A



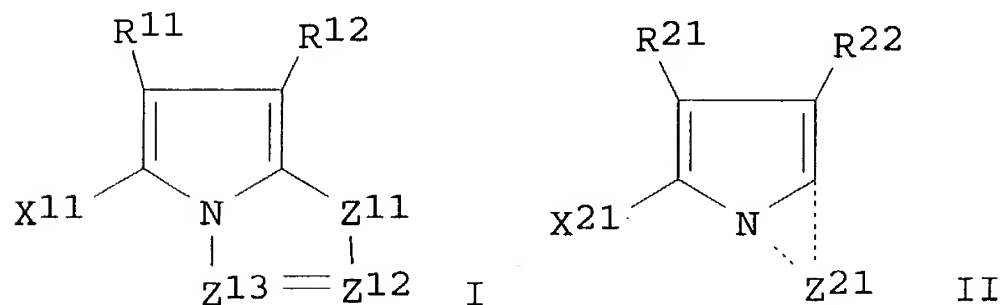
PAGE 2-A



IC ICM G03C007-305
ICS G03C007-392
CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
ST **photog** bleaching assistant releasing compd
IT **Photographic** films
(bleaching assistant-releasing compd. for)
IT 162244-80-6 162244-81-7 162244-82-8 162244-83-9 162244-84-0
162244-85-1 162244-86-2 162244-87-3 162244-88-4
(**photog.** bleaching assistant-releasing compd.)
IT 162244-89-5P 162244-90-8P
(**photog.** bleaching assistant-releasing compd.)
IT 2038-03-1, 4-Morpholineethanamine 162244-92-0
(**photog.** bleaching assistant-releasing compd. from)
IT 102580-28-9P 162244-91-9P
(**photog.** bleaching assistant-releasing compd. from)

L45 ANSWER 12 OF 26 HCA COPYRIGHT 2003 ACS
121:267599 Color **photographic** photosensitive material
containing cyan coupler and nucleation promoter. Kuwajima, Shigeru;
Shimada, Yasuhiro (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai
Tokkyo Koho JP 05303184 A2 19931116 Heisei, 95 pp.
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-131691 19920424.

GI



AB In the title material, .gtoreq.1 layer(s) of **Ag**
halide emulsion layers or nonphotosensitive layers contains
a cyan coupler I [R11, R12 = electron-withdrawing group having a
Hammett's substituent const. .sigma.p >0.20 (the sum of the .sigma.p
values of R11 and R12 is >0.65); Z11 = NH, CHR13; Z12 = CR14, N; ,

Z13 = CR15, N; R13 = electron-withdrawing group having a Hammett's substituent const. $\sigma_p > 0.20$; R14, R15 = H, substituent; X11 = H, group to be eliminated upon coupling] or II (R21 = H, substituent; R22 = substituent; Z21 = nonmetallic at. group for forming a N-contg. 6-membered heterocyclic ring having $\sigma_{\text{toreq.1}}$ disson. group; X21 = H, group to be eliminated upon coupling) and a fogging agent, a **development** promoter, or compds. for releasing their precursors corresponding to **development** Ag during **development**. The material provides **images** having improved high max. d. and low min. d. and is suited for making color proofs.

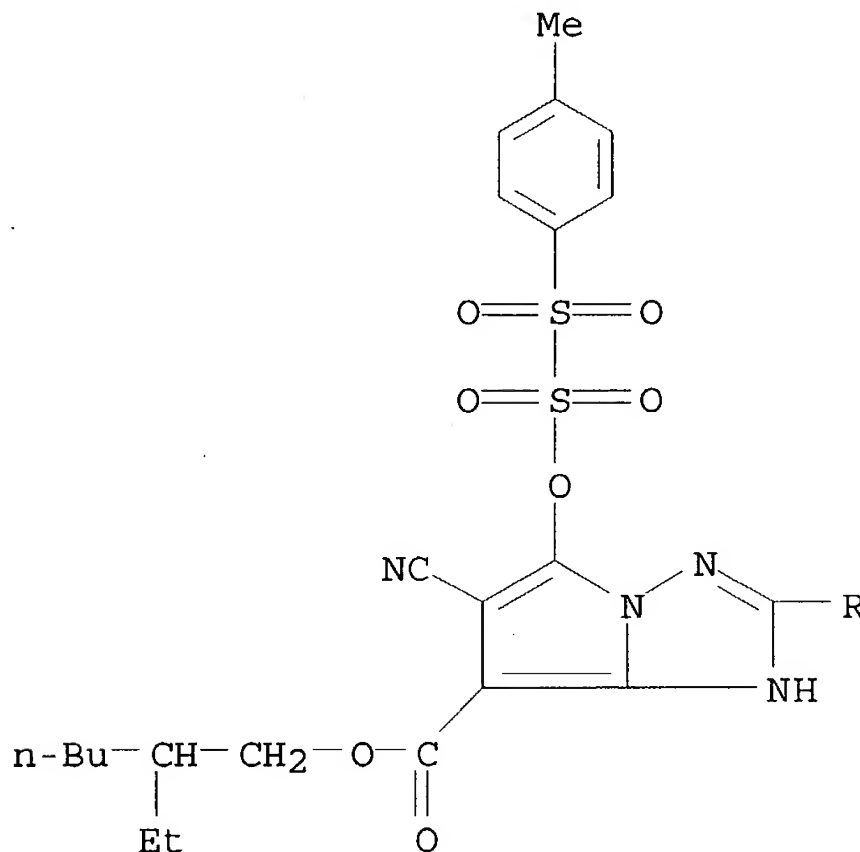
IT 158686-23-8

(cyan **photog.** coupler, for **images** having improved high max. d. and low min. d.)

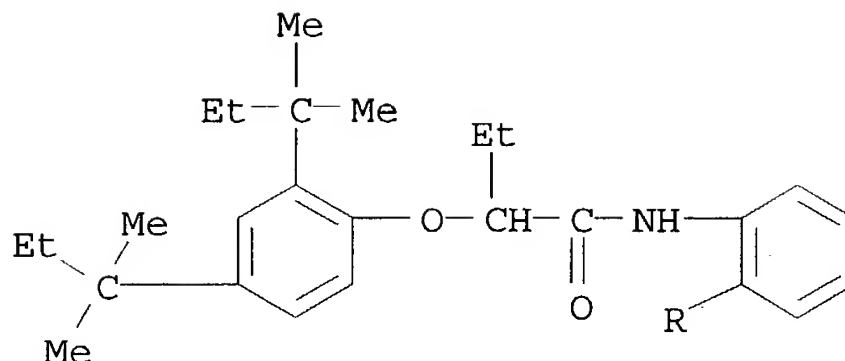
RN 158686-23-8 HCA

CN 1H-Pyrrolo[1,2-b][1,2,4]triazole-7-carboxylic acid, 2-[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxobutyl]amino]phenyl]-6-cyano-5-[[[4-methylphenyl]disulfonyl]oxy]-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



- IC ICM G03C007-38
ICS G03C001-485; G03C001-83; G03C007-305; G03C007-407; G03C007-413;
G03F003-10
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST silver color **photog** photosensitive material; cyan
photog coupler fogging agent; **development**
accelerator color **photog** material
- IT **Photographic** paper
(color, for **images** having improved high max. d. and low
min. d.)
- IT **Photographic** couplers
(cyan, for **images** having improved high max. d. and low
min. d.)
- IT 151645-00-0 154021-62-2 158686-23-8 158739-39-0
(cyan **photog.** coupler, for **images** having
improved high max. d. and low min. d.)
- IT 151019-65-7P 151645-02-2P
(cyan **photog.** coupler, prepn. of)
- IT 113740-95-7 117074-26-7 146656-19-1
(fogging agent- or **development** promoter-releasing
compd.)
- IT 146822-29-9P 151019-75-9P 151019-76-0P 151645-01-1P
(prepn. and reaction of, for cyan **photog.** coupler)
- L45 ANSWER 13 OF 26 HCA COPYRIGHT 2003 ACS
121:121607 **Photographic** process for forming heat-transferable
dye **images** using polymeric couplers. Texter, John; Chen,
Tien Teh; White, Ronald Henry (Eastman Kodak Co., USA). Eur. Pat.
Appl. EP 582988 A2 19940216, 43 pp. DESIGNATED STATES: R:
BE, CH, DE, FR, GB, IT, LI, NL. (English). CODEN: EPXXDW.
APPLICATION: EP 1993-112735 19930809. PRIORITY: US 1992-927691
19920810.
- AB A process is disclosed for forming a dye **image** including
the steps of exposing a **photog.** element comprising a
support bearing a photosensitive **silver halide**
emulsion layer contg. a polymeric color coupler capable of forming a
heat-transferable dye upon **development**, wherein the

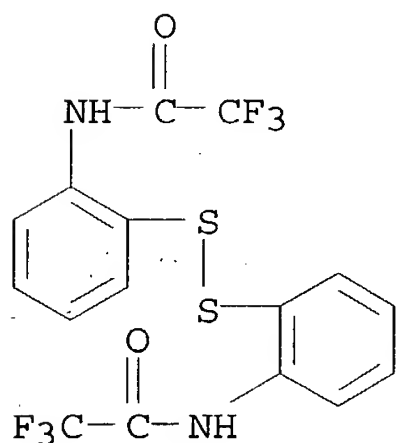
polymeric color coupler is of the formula COUPLB wherein COUP represents a coupler moiety of forming a heat-transferable dye upon reaction of the moiety with an oxidn. product of a color **developer**; L is a divalent linking group which is sepd. from COUP upon reaction of the coupler moiety with an oxidn. product of a color **developer**; and B represents the polymeric backbone, **developing** the exposed element with a color **developer** soln. to form a heat-transferable dye **image**, heating the **developed** element to thereby transfer the dye **image** from the emulsion layer to a dye-receiving layer, where the dye-receiving layer is a part of the **photog.** element or a part of a sep. dye-receiving element brought into contact with the **photog.** element, and sepg. the emulsion layer from the dye-receiving layer contg. the transferred dye **image**.

IT 91359-02-3

(reaction of, in prepg. polymeric **photog.** coupler)

RN 91359-02-3 HCA

CN Acetamide, N,N'-(dithiodi-2,1-phenylene)bis[2,2,2-trifluoro- (9CI)
(CA INDEX NAME)



IC ICM G03C007-327

ICS G03C008-40; G03C008-10

ICA C08F020-36; C08F020-60

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)

ST heat transferable dye **image photog**; polymeric
photog coupler heat transferable dye

IT **Photographic** couplers

(polymeric, for forming heat-transferable dye **images**)

IT **Photographic** films

(color, for forming heat-transferable dye **images**)

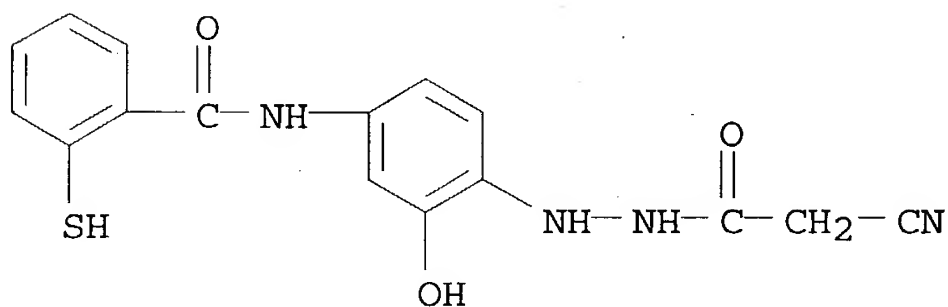
IT 62609-85-2P 156989-70-7P 156989-71-8P 156989-72-9P
156989-73-0P 156989-74-1P 156989-77-4P 156989-81-0P
156989-82-1P

(prepn. and reaction of, in prepg. polymeric **photog.**
coupler)

IT 156989-78-5P 156989-79-6P 156989-80-9P

(prepn. and use of, as cyan **photog.** coupler)

- IT 156989-83-2P 156989-84-3P
(prepn. and use of, as magenta **photog.** coupler)
- IT 156989-75-2P 156989-76-3P
(prepn. and use of, as yellow **photog.** coupler)
- IT 106-74-1, Ethoxyethyl acrylate 141-32-2 369-36-8,
2-Fluoro-5-nitroaniline 814-68-6, Acryloyl chloride 5165-97-9
6268-48-0 38486-53-2 63134-34-9 **91359-02-3**
92484-90-7 96860-14-9
(reaction of, in prepg. polymeric **photog.** coupler)
- L45 ANSWER 14 OF 26 HCA COPYRIGHT 2003 ACS
- 115:170812 A super-high contrast negative **silver halide photographic** light-sensitive material containing hydrazine derivatives for photomechanical process. Goto, Takahiro; Kato, Kazunobu; Okamura, Hisashi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 02311840 A2 **19901227** Heisei, 31 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-134155 19890526.
- AB A super-high contrast neg. **Ag halide** photosensitive material comprises on a support .gtoreq.1 **Ag halide** emulsion layer which or other hydrophilic colloid layer contains hydrazine derivs. XNHNHCOYEWG (X = aliph., arom., or heterocyclyl group; Y = CHR, NH; R = H, X, EWG; EWG = electron withdrawing group; or YEWG forming a ring;) and R1NA1NA2G1R2 [R1 = aliph. or arom. group; R2 = H, alkyl, aryl, alkoxy, aryloxy, NH2, CONH2, oxycarbonyl; G1 = CO, SO2, SO2O, P(O)R2, NHCH2; A1 = A2 = H; or one of A1, A2 = H and the other = (un)substituted alkylsulfonyl, arylsulfonyl, or acyl]. This **photog.** material maintains the max. **image** d. (Dmax) in spite of the degrdn. (particularly redn. of sulfite ion concn.) of a **developing** soln.
- IT **136322-63-9**
(**photog.** emulsion contg., for photomech. process)
- RN 136322-63-9 HCA
- CN Acetic acid, cyano-, 2-[2-hydroxy-4-[(2-mercaptobenzoyl)amino]phenyl]hydrazide (9CI) (CA INDEX NAME)



- IC ICM G03C001-06
- CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST superhigh contrast neg **photog** material; hydrazine deriv
neg **photog** material; photomech plate hydrazine deriv;

developer degrdn sulfite ion concn

IT **Photographic emulsions**

(high-contrast, contg. hydrazine derivs., for photomech. process)

IT 119191-99-0 120381-01-3 121039-20-1 121039-22-3 121039-30-3
135767-14-5 135767-15-6 135767-24-7 136322-61-7 136322-62-8
136322-63-9 136322-64-0 136322-65-1

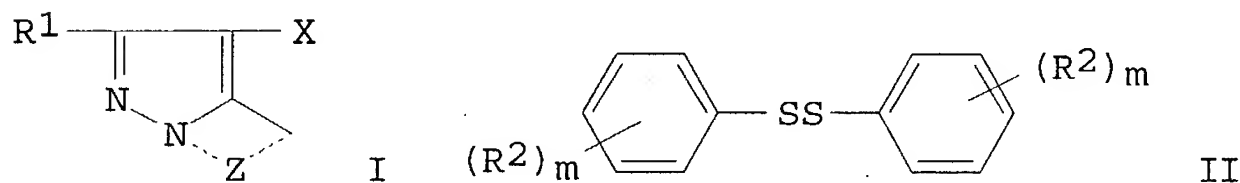
(**photog.** emulsion contg., for photomech. process)

L45 ANSWER 15 OF 26 HCA COPYRIGHT 2003 ACS

114:14794 **Silver halide photographic**

material containing pyrazoloazole magenta coupler and **image** stabilizer. Seto, Nobuo; Morigaki, Masakazu (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 02023338 A2 19900125 Heisei, 31 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-173475 19880712.

GI



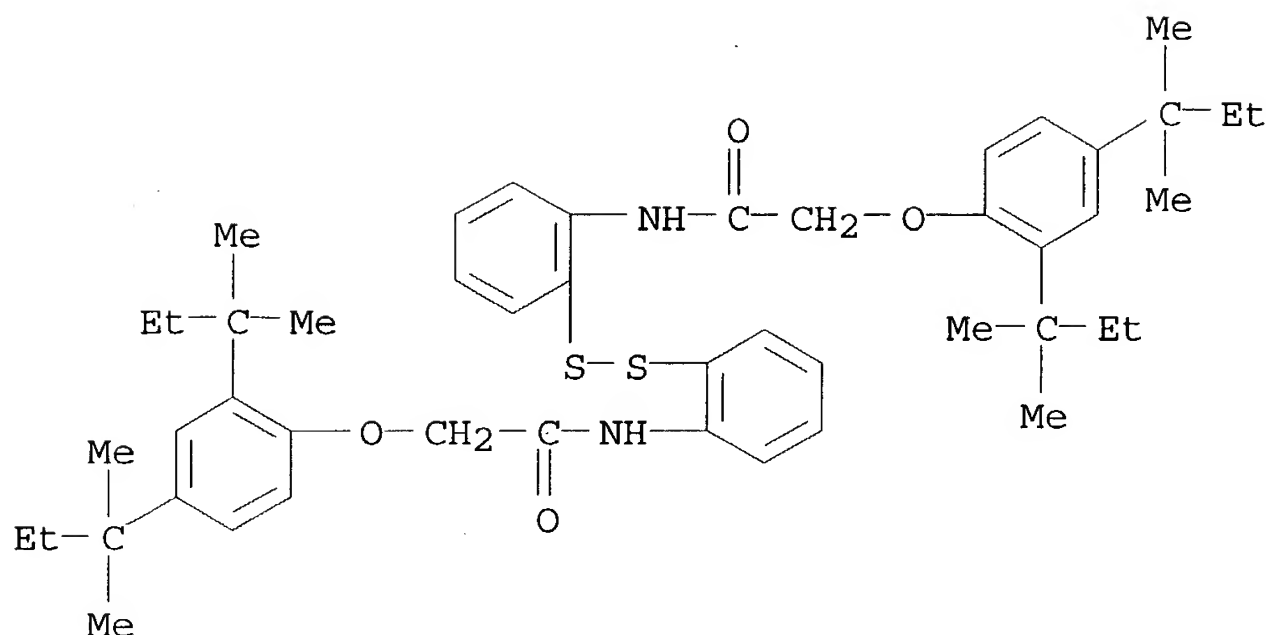
AB The title color **photog.** material contains .gtoreq.1 pyrazoloazole coupler having the formula I [R1 = H, a substituent; X = H, a group to be released upon coupling reaction with an oxidized arom. primary amine **developer**; Z = a group necessary to form a N-contg. heterocyclic ring] and .gtoreq.1 compd. having the formula II [R2 = H, halogen, alkyl, alkoxy, alkylthio, amino, acylamino, sulfoneamido, alkoxycarbonyl, aryloxycarbonyl, acyl, carbamoyl, sulfamoyl, sulfonyl, cyano, heterocyclyl, OH, aryl; m = 1-5]. II is used as an **image** stabilizer.

IT 130896-91-2

(**image** stabilizer, for color **photog.** material)

RN 130896-91-2 HCA

CN Acetamide, N,N'-(dithiodi-2,1-phenylene)bis[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]- (9CI) (CA INDEX NAME)



- IC ICM G03C007-38
ICS G03C007-26; G03C007-392
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST pyrazoloazole magenta coupler; diphenyl disulfide **image**
stabilizer; disulfide **image** stabilizer
- IT **Photographic** stabilizers
(di-Ph disulfide derivs. as)
- IT **Photographic** couplers
(magenta, pyrazoloazoles as)
- IT 89447-58-5 117137-41-4 122745-04-4 130896-91-2
130896-92-3
(**image** stabilizer, for color **photog.**
material)
- IT 113463-09-5 130896-90-1
(magenta **photog.** coupler)

L45 ANSWER 16 OF 26 HCA COPYRIGHT 2003 ACS

112:226649 **Silver halide** color **photographic**
materials containing polymeric couplers. Hirano, Tsumoru (Fuji
Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01134357 A2
19890526 Heisei, 49 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1987-292598 19871119.

AB The title materials, showing good coloration, storability, and
sharpness contain oil-sol. polymeric coupler EAxByX [E = C.gtoreq.2
monovalent group; A = ethylenically unsatd. monomer repeating unit
with coupler pendant group (this unit may be formed from .gtoreq.2
different monomers that produce the same color upon coupling with
arom. primary amine **developing** agent oxidn. product); B =
repeating unit of noncoloring comomer(s); E or B may contain F or
group that bond with the binder directly or via a film hardener; X =
monovalent group; x:y = 10:90 to 150:0].

IT 125870-66-8P 126009-96-9P

(photog. couplers, manufg. of)

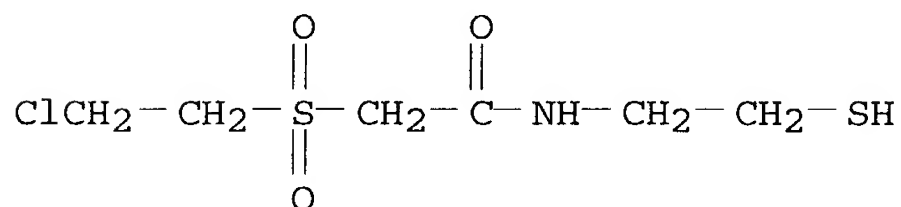
RN 125870-66-8 HCA

CN 2-Propenoic acid, 2-methyl-, butyl ester, telomer with
 2-[(2-chloroethyl)sulfonyl]-N-(2-mercaptoethyl)acetamide and
 3-[3'-[(2,2-dimethyl-1-oxopropyl)amino]-4',5'-dihydro-5'-oxo-1'-
 (2,4,6-trichlorophenyl)[1,4'-bi-1H-pyrazol]-4-yl]propyl 2-propenoate
 (9CI) (CA INDEX NAME)

CM 1

CRN 125450-49-9

CMF C6 H12 Cl N O3 S2



CM 2

CRN 125870-65-7

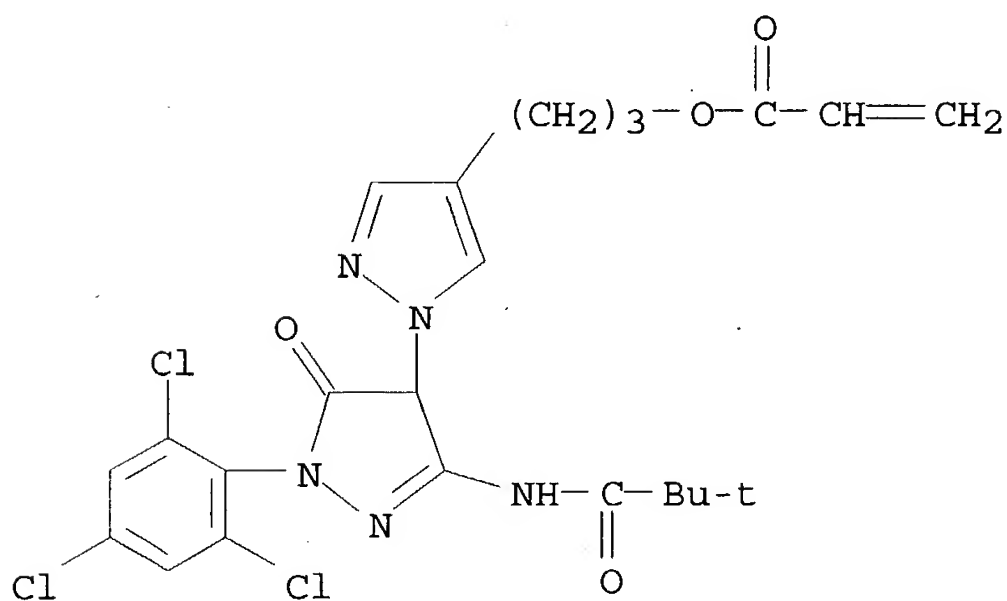
CMF (C23 H24 Cl3 N5 O4 . C8 H14 O2)x

CCI PMS

CM 3

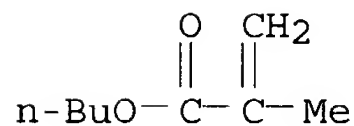
CRN 98209-27-9

CMF C23 H24 Cl3 N5 O4



CM 4

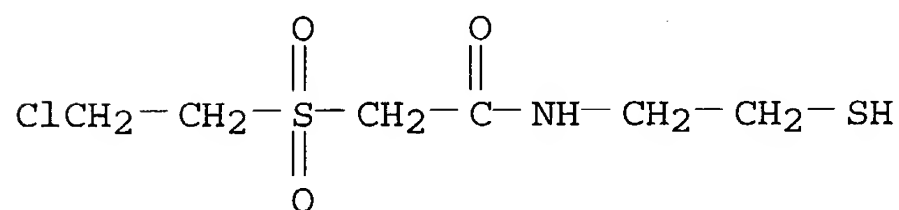
CRN 97-88-1
CMF C8 H14 O2



RN 126009-96-9 HCA
CN 2-Propenoic acid, ethyl ester, telomer with 2-[(2-chloroethyl)sulfonyl]-N-(2-mercaptoethyl)acetamide and 2,2,3,4,4,4-heptafluoro-N-[2-hydroxy-4-[(1-oxo-2-propenyl)amino]phenyl]butanamide (9CI) (CA INDEX NAME)

CM 1

CRN 125450-49-9
CMF C6 H12 Cl N O3 S2

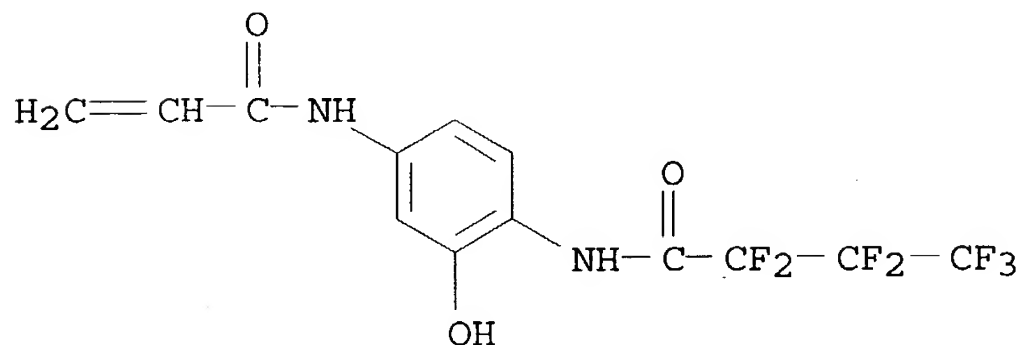


CM 2

CRN 113922-12-6
CMF (C13 H9 F7 N2 O3 . C5 H8 O2)x
CCI PMS

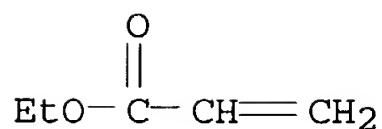
CM 3

CRN 113922-11-5
CMF C13 H9 F7 N2 O3



CM 4

CRN 140-88-5
CMF C5 H8 O2



- IC ICM G03C007-32
CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
ST **silver halide** color **photog** material;
telomer **photog** color coupler
IT Telomers
(**photog.** couplers, manufg. of)
IT **Photographic** couplers
(telomer, manufg. of)
IT 79-10-7DP, 2-Propenoic acid, perfluoroalkylethyl esters, telomer
with acrylamide group-contg. coupler and thiol 103-11-7DP, telomer
with acrylamide group-contg. coupler and thiol and
perfluoroalkylethyl acrylate 111-88-6DP, 1-Octanethiol, telomer
with acrylamide group-contg. couplers and perfluoroalkylethyl
acrylate 141-32-2DP, telomer with acrylamide group-contg. coupler
and thiol and perfluoroalkylethyl acrylate 34143-74-3DP, telomer
with acrylamide group-contg. couplers and ethylhexylacrylate and
perfluoroalkylethyl acrylate and perfluorooctylethanethiol ,
68805-73-2DP, telomer with ethylhexyl acrylate and
perfluoroalkylethyl acrylate and perfluorooctylethane thiol
89883-78-3DP, telomer with Bu acrylate and N-
bis(perfluoroalkylethoxycarbonyl)phenylthioacetamide
113883-99-1DP, telomer with Bu acrylate and N-
bis(perfluoroalkylethoxycarbonyl)phenylthioacetamide
113922-11-5DP, telomer with Bu acrylate and perfluoroalkylethyl
mercaptoacetate 120283-46-7DP, telomer with octanethiol and
perfluoroalkylethyl acrylate 125816-83-3DP, perfluoroalkylethyl
esters, telomer with acrylamide group-contg. coupler and thiol
125870-52-2P 125870-54-4P 125870-56-6P 125870-58-8P
125870-61-3P 125870-63-5P 125870-64-6P **125870-66-8P**
125870-67-9P 125870-69-1P 125870-72-6P 125984-57-8P
125984-59-0P 125984-61-4P 125992-07-6P 126009-95-8P
126009-96-9P 126037-65-8P 127210-95-1P
(**photog.** couplers, manufg. of)

L45 ANSWER 17 OF 26 HCA COPYRIGHT 2003 ACS

112:148936 **Silver halide** color **photographic**
materials. Sakagami, Megumi; Yamanochi, Junichi (Fuji Photo Film
Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01142632 A2
19890605 Heisei, 72 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1987-301889 19871130.

AB The title materials providing sharp color **images** with
improved graininess and latent **image** storability contain,
in the same **Ag halide** emulsion layer, .gtoreq.1

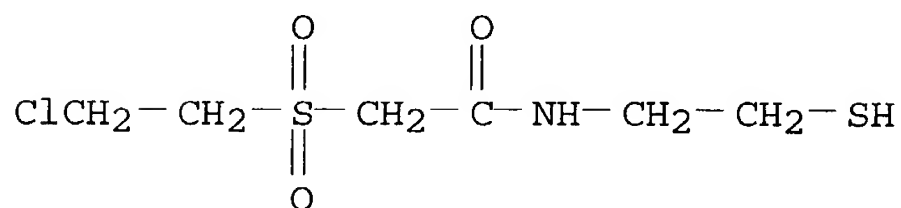
polymeric coupler prepd. in the presence of a chain-transfer agent with chain-transfer const. 0.01-50 and .gtoreq.1 compds. that do not form dyes with arom. primary amine **developing** agent oxidn. product.

IT 125450-49-9

(chain-transfer agents, in polymn. of **photog.** couplers)

RN 125450-49-9 HCA

CN Acetamide, 2-[(2-chloroethyl)sulfonyl]-N-(2-mercaptoethyl)- (9CI)
(CA INDEX NAME)



IC ICM G03C007-32

ICS G03C007-26

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35

ST **silver halide** color **photog** coupler;
telomer coupler color **photog**

IT Thiols, uses and miscellaneous

(chain-transfer agents, in polymn. of **photog.** couplers)

IT Telomers

(manuf. and use of, as **photog.** couplers, for sharp color **images** with improved graininess and latent **image** storability)

IT Chain-transfer agents

(mercaptans, in polymn. of **photog.** couplers)

IT **Photographic** couplers

(telomer, for sharp color **images** with improved graininess and latent **image** storability)

IT 68-11-1D, fluoroalkyl esters 107-03-9, 1-Propanethiol 109-79-5,
1-Butanethiol 111-88-6, 1-Octanethiol 112-55-0, 1-Dodecanethiol
34143-74-3 45357-98-0, Oxiranemethanethiol 125450-49-9

(chain-transfer agents, in polymn. of **photog.** couplers)

IT 112-16-3DP, Dodecanoyl chloride, reaction products with telomers

112-64-1DP, Tetradecanoyl chloride, reaction products with telomers

112-67-4DP, Hexadecanoyl chloride, reaction products with telomers

124-22-1DP, 1-Dodecanamine, reaction products with telomers

6166-47-8DP, Octanoyl bromide, reaction products with telomers

113883-78-6P 113883-86-6P 113883-87-7P 113883-90-2P

113883-93-5P 113921-98-5P 113922-02-4P 113922-10-4P

113922-16-0P 125489-12-5DP, reaction products with telomeric

photog. couplers 125489-13-6DP, reaction products with

telomers 125489-67-0P 125489-71-6P 125489-72-7P 125489-74-9P

125489-75-0P 125489-77-2P 125489-78-3P 125489-79-4P

125489-80-7P 125489-83-0P 125489-84-1DP, reaction products with
tetradecanoyl chloride 125489-86-3DP, reaction products with

tetradecanoyl chloride 125489-87-4DP, reaction products with
 dodecanoic chloride 125489-89-6DP, reaction products with
 dodecanamine 125489-90-9DP, reaction products with dodecanoic
 chloride 125489-91-0DP, reaction products with dodecanoic chloride
 125489-93-2DP, reaction products with phenoxyhexanoate chloride
 125489-96-5DP, reaction products with dodecanoate chloride
 125489-99-8DP, reaction products with tetradecanoate chloride
 125490-00-8DP, reaction products with (di-tert-
 pentylphenoxy)butanoate chloride 125490-01-9DP, reaction products
 with dodecanoate chloride 125490-02-0DP, reaction products with
 dodecanoate chloride 125490-03-1DP, reaction products with
 tetradecanoate chloride 125490-06-4DP, reaction products with
 hexadecanoate chloride 125490-07-5DP, reaction products with
 tetradecanoate chloride 125490-09-7DP, reaction products with
 hexadecanoate chloride 125490-10-0DP, reaction products
 tetradecanoate chloride 125490-12-2DP, reaction products
 tetradecanoate chloride 125490-15-5DP, reaction products with
 octanoate chloride 125623-06-5P 125807-43-4P 125913-09-9P
 125913-46-4P 125935-95-7P

(manuf. and use of, as **photog.** couplers, for sharp
 color **images** with improved graininess and latent
image storability)

IT 79-10-7DP, 2-Propenoic acid, fluoroalkyl esters, polymer with
photog. coupler compds. 5165-97-9DP, polymer with
photog. coupler compds. 118038-26-9DP, polymer with
photog. coupler compds. 125449-65-2P 125449-66-3P
 125449-67-4P 125449-69-6DP, polymers with fluoroalkylacrylate and
 sodium acrylamidohexanoate 125449-71-0P 125449-72-1P
 125449-73-2P 125449-74-3P 125449-76-5P 125449-77-6P
 125449-78-7P 125449-79-8P 125449-80-1P 125449-81-2P
 125449-82-3P 125449-85-6P 125449-87-8DP, polymer with
 fluoroalkylacrylate and acrylamide derivs. 125450-35-3P
 125450-51-3P 125466-59-3P 125635-18-9P 125649-47-0P

(manuf. of, for **photog.** couplers)

IT 903-19-5, 2,5-Di-tert-octylhydroquinone 24730-07-2 51025-12-8
 87667-24-1 87667-27-4 89131-33-9 99107-49-0 121700-10-5

(noncoloring **photog.** couplers, telomeric couplers
 contg., for sharp color **images** with improved graininess
 and latent **image** storability)

L45 ANSWER 18 OF 26 HCA COPYRIGHT 2003 ACS

112:148934 **Silver halide** color **photographic**

materials containing polymeric couplers. Hirano, Tsumoru;
 Yamanochi, Junichi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai
 Tokkyo Koho JP 01134453 A2 19890526 Heisei, 51 pp.
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 1987-294675 19871120.

AB The title materials showing good coloration and **image**
 sharpness contain water-sol. polymer coupler(s) EAxByX (E =
 C.gtoreq.2 monovalent group; A = repeating units of .gtoreq.1
 ethylenically unsatd. monomers forming dyes of the same shade upon
 coupling with arom. primary amine **developing** oxidn.
 product; B = noncoloring ethylenically unsatd. comonomer unit; X =

IT monovalent group; x:y = 10:90-90:10).

125450-50-2P

(manuf. and use of, as **photog.** couplers, for improved coloration and **image** sharpness)

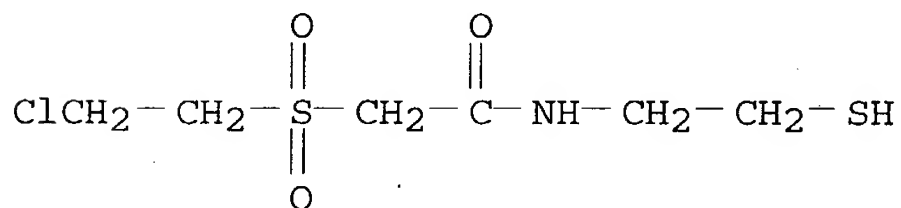
RN 125450-50-2 HCA

CN 2-Propenoic acid, 2-methyl-, methyl ester, telomer with 2-[(2-chloroethyl)sulfonyl]-N-(2-mercaptoethyl)acetamide, 3-[3'-[(2,2-dimethyl-1-oxopropyl)amino]-4,5'-dihydro-5'-oxo-1'-(2,4,6-trichlorophenyl)[1,4'-bi-1H-pyrazol]-4-yl]propyl 2-propenoate and 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid monosodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 125450-49-9

CMF C6 H12 Cl N O3 S2



CM 2

CRN 125449-78-7

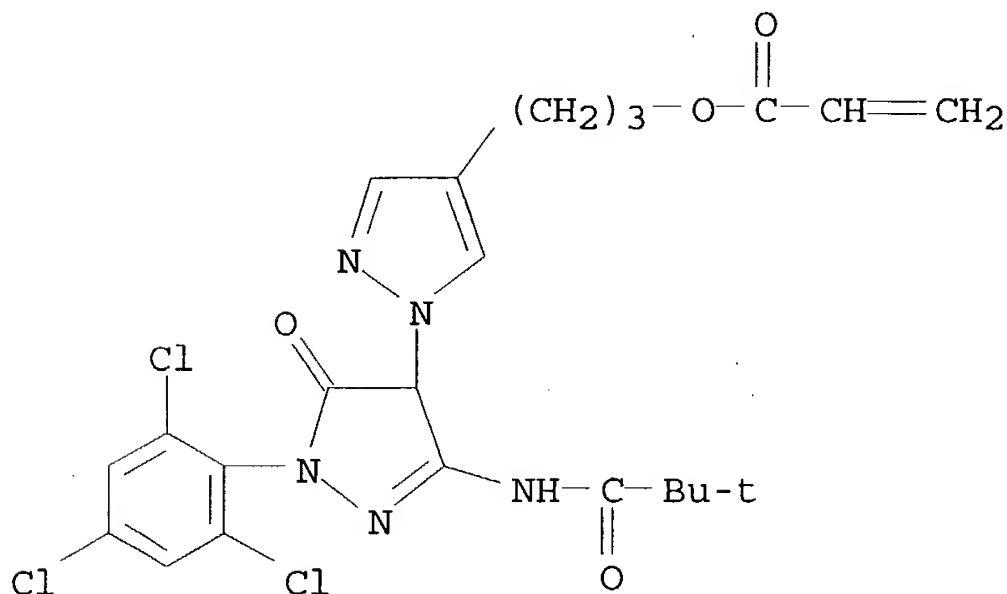
CMF (C23 H24 Cl3 N5 O4 . C7 H13 N O4 S . C5 H8 O2 . Na)x

CCI PMS

CM 3

CRN 98209-27-9

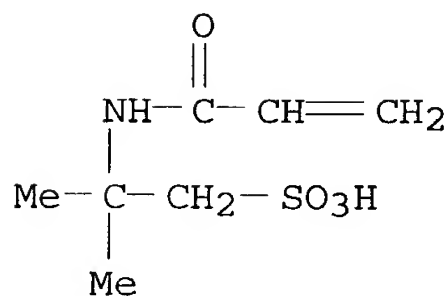
CMF C23 H24 Cl3 N5 O4



CM 4

CRN 5165-97-9

CMF C7 H13 N O4 S . Na

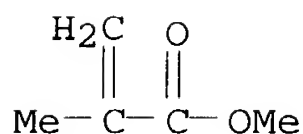


● Na

CM 5

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03C007-32

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
Section cross-reference(s): 35ST telomer coupler color **photog**; **silver**
halide photog color coupler

IT Telomers

(manuf. and use of, as **photog.** couplers, for improved
coloration and **image** sharpness)IT **Photographic** couplers(telomers, for improved coloration and **image** sharpness)

IT	125450-32-0P	125450-34-2P	125450-36-4P	125450-38-6P
	125450-39-7P	125450-43-3P	125450-44-4P	125450-45-5P
	125450-46-6P	125450-48-8P	125450-50-2P	125450-52-4P
	125450-53-5P	125450-55-7P	125450-58-0P	125450-60-4P
	125450-63-7P	125466-67-3P	125466-68-4P	125466-70-8P
	125466-73-1P	125466-77-5P	125490-16-6P	125668-58-8P
	125984-11-4P			

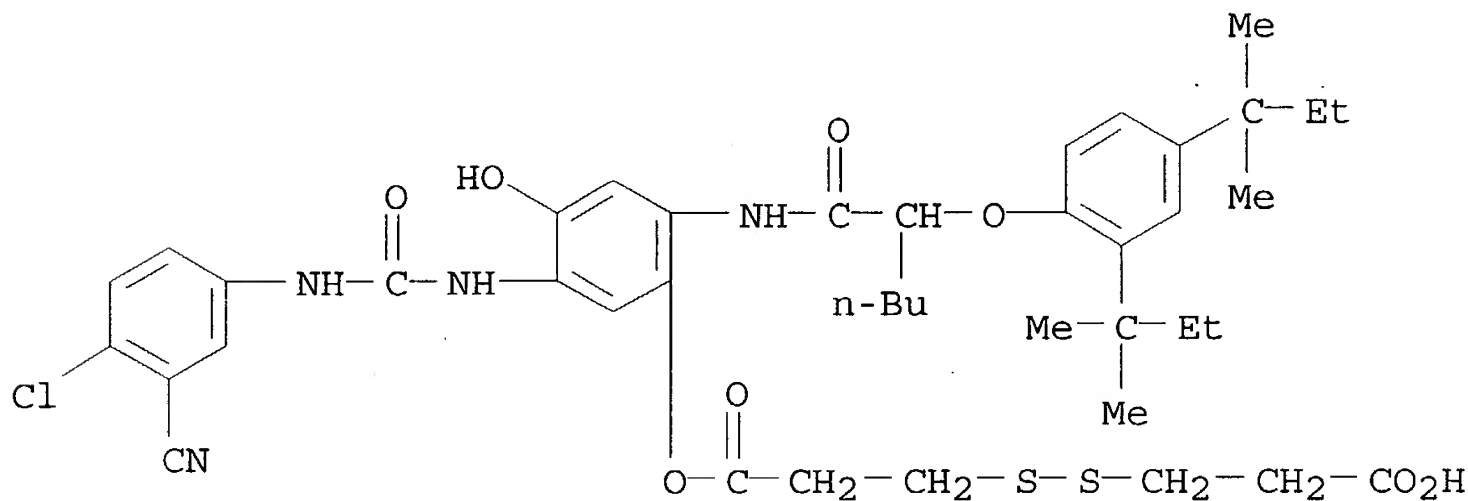
(manuf. and use of, as **photog.** couplers, for improved
coloration and **image** sharpness)

109:180315 Bleach-promoting agent for silver halide

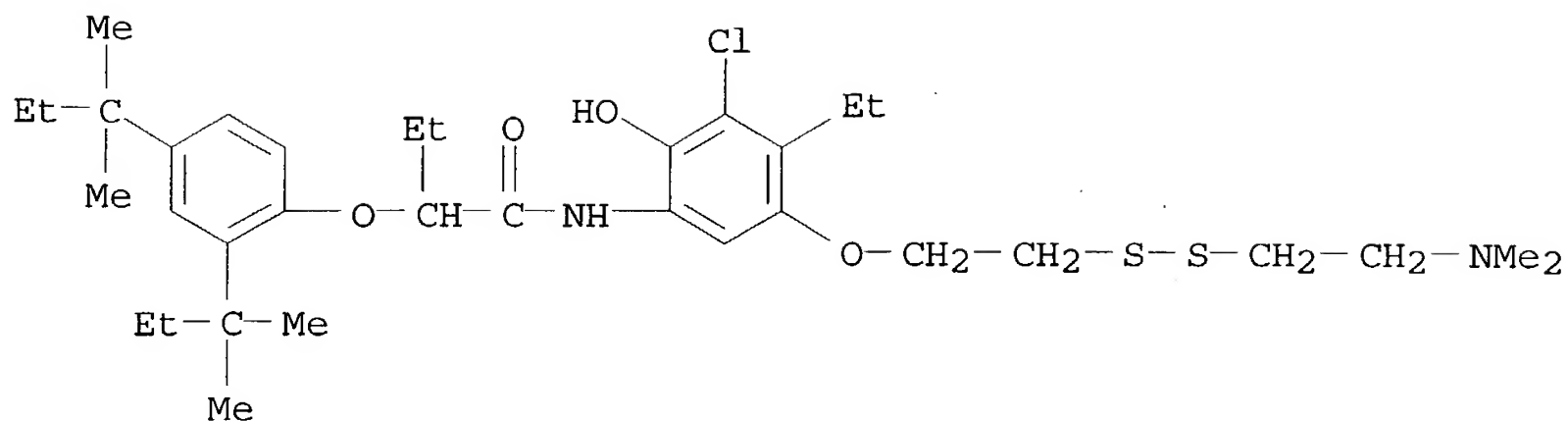
AB A method for processing a **Ag halide** color **photog.** material contg. a compd. which releases a fogging agent (or precursor) or a **development** inhibitor (or precursor) imagewise according to the amt. of **developed** Ag during **development** is claimed wherein the **developed** material is bleached or bleach-fixed in the presence of a compd. which releases a bleach-promoting agent through a reaction with an oxidized color **developing** agent.

(bleach promoter-releasing coupler, processing of color
photoq. material in presence of)

CN Propanoic acid, 3-[(2-carboxyethyl)dithio]-, 1-[2-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-5-[[[(4-chloro-3-cyanophenyl)amino]carbonyl]amino]-4-hydroxyphenyl] ester (9CI) (CA INDEX NAME)

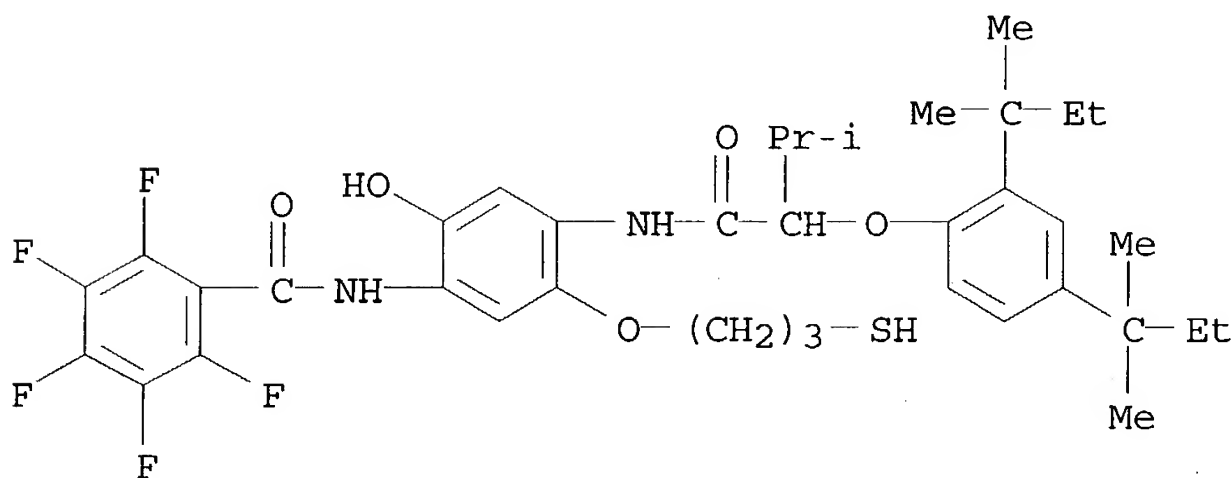


CN Butanamide, 2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-N-[3-chloro-5-[2-
[[2-(dimethylamino)ethyl]dithio]ethoxy]-4-ethyl-2-hydroxyphenyl]-
(9CI) (CA INDEX NAME)



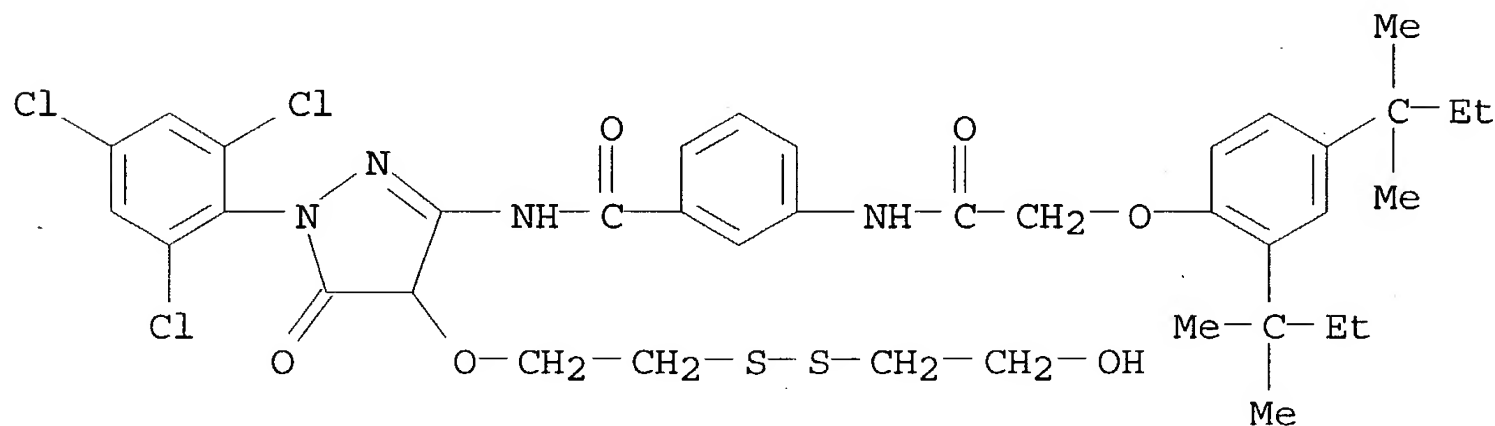
RN 117074-38-1 HCA

CN Benzamide, N-[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-3-methyl-1-oxobutyl]amino]-2-hydroxy-5-(3-mercaptopropoxy)phenyl]-2,3,4,5,6-pentafluoro- (9CI) (CA INDEX NAME)



RN 117074-40-5 HCA

CN Benzamide, 3-[[[2,4-bis(1,1-dimethylpropyl)phenoxy]acetyl]amino]-N-[4,5-dihydro-4-[2-[(2-hydroxyethyl)dithio]ethoxy]-5-oxo-1-(2,4,6-trichlorophenyl)-1H-pyrazol-3-yl]- (9CI) (CA INDEX NAME)



IC ICM G03C007-42

ICS G03C007-26; G03C007-30

CC **74-2** (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)

ST bleach accelerator releaser **photog** processing

IT **Photographic** couplers
(fogging agent-releasing, processing of color films contg.)

IT **Photographic** processing
(use of bleach accelerator releaser in, of fogging agent
releaser-contg. color films)

IT 116369-29-0 116369-30-3 116369-31-4 **116369-32-5**
116369-33-6 116369-34-7 116369-35-8 116369-36-9 116369-37-0
116369-38-1 116369-39-2 116400-38-5 116983-94-9 117074-36-9
117074-37-0 117074-38-1 117074-39-2
117074-40-5 117074-41-6 117074-42-7 117074-43-8
117074-44-9 117074-45-0 117074-46-1 117074-47-2 117074-48-3
117074-49-4 117074-50-7 117074-51-8
(bleach promoter-releasing coupler, processing of color
photog. material in presence of)

IT 90178-02-2 90208-16-5 90208-19-8 92989-62-3 93610-14-1
93641-23-7 97802-42-1 98312-76-6 98349-00-9 99049-08-8
99049-12-4 99049-20-4 99119-43-4 99893-19-3 101926-09-4
105488-33-3 111283-72-8 112537-65-2 113740-94-6 115721-07-8
116646-25-4 117074-26-7 117074-27-8 117074-28-9 117074-29-0
117074-30-3 117074-31-4 117074-32-5 117074-33-6 117074-34-7
117074-35-8
(fogging agent-releasing coupler, processing of color
photog. material contg., in presence of bleach promoter)

L45 ANSWER 20 OF 26 HCA COPYRIGHT 2003 ACS

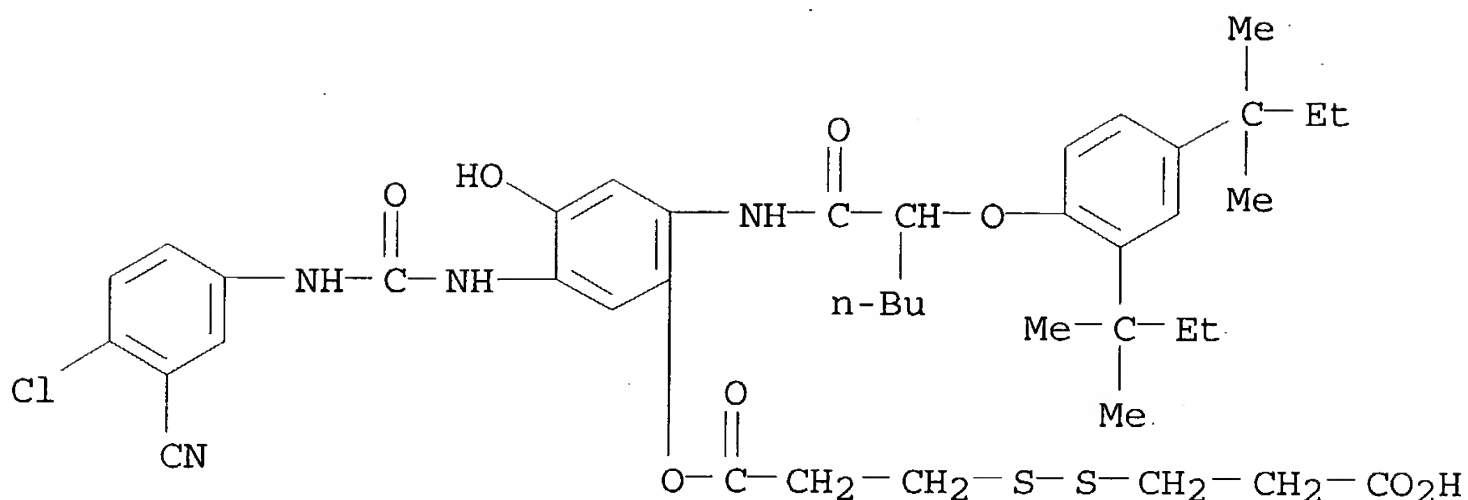
109:119551 **Silver halide color photographic**
material containing bleach-promoter-releasing couplers. Kida,
Shuji; Nakagawa, Satoshi; Kunieda, Sunao (Konica Co., Japan). Jpn.
Kokai Tokyo Koho JP 63070854 A2 **19880331** Showa, 14 pp.
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1986-216559 19860912.

AB Claimed is a **Ag halide color photog.**
material contg. bleach promoter-releasing couplers QTlO(CO)mRSR' [Q
= coupler residue capable of reacting with a color
developing agent; T = timing group; R = linking group; R1 =
H, CN, COR3, CSR3, CONR3R4, CSNR3R4, heterocyclyl, C(:NR6)NR4R5,
SR3, NR3R4; R3 = alkyl, aryl; R4, R5, R6 = H, alkyl, aryl; l, m = 0,
1], which improve removal of Ag during processing.

IT **116369-32-5**
(**photog.** couplers, bleach promoter-releasing, for
improved silver removal)

RN 116369-32-5 HCA

CN Propanoic acid, 3-[(2-carboxyethyl)dithio]-, 1-[2-[[2-[2,4-bis(1,1-
dimethylpropyl)phenoxy]-1-oxohexyl]amino]-5-[[[(4-chloro-3-
cyanophenyl)amino]carbonyl]amino]-4-hydroxyphenyl] ester (9CI) (CA
INDEX NAME)



- IC ICM G03C007-32
ICS G03C007-26
- CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)
- ST bleach promoter releasing **photog** coupler
- IT **Photographic** couplers
(bleach promoter-releasing, for improved silver removal)
- IT 116369-30-3 116369-31-4 **116369-32-5** 116369-33-6
116369-34-7 116369-35-8 116369-36-9 116369-37-0 116369-38-1
116400-38-5
(**photog.** couplers, bleach promoter-releasing, for
improved silver removal)
- IT 63023-22-3P 116369-40-5P
(prepn. and reaction of, **photog.** bleach
promoter-releasing coupler from)
- IT 116369-29-0P 116369-39-2P
(prepn. of, as bleach promoter-releasing **photog.**
coupler, for improved silver removal)
- IT 62-56-6, Thiourea, reactions 540-51-2 31519-22-9 50771-78-3
51959-14-9 74518-60-8
(reaction of, **photog.** bleach promoter-releasing coupler
from)
- L45 ANSWER 21 OF 26 HCA COPYRIGHT 2003 ACS
- 108:46776 **Silver halide** color **photographic**
material. Sasaki, Masao; Onodera, Kaoru (Konishiroku Photo Industry
Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 62165654 A2
19870722 Showa, 52 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1986-8406 19860118.
- AB A **photog.** material contg. .gtoreq.1 **Ag**
halide emulsion layers on a support is claimed wherein the
Ag halide emulsion contained in .gtoreq.1 of the
layers occurs in combination with color **image** forming
couplers and a compd. DTnL [D = group capable of releasing TnL as a
function of **Ag halide development**; T =
group capable of releasing L during or after the release of TnL; L =
group capable of stabilizing color **image** by complexing

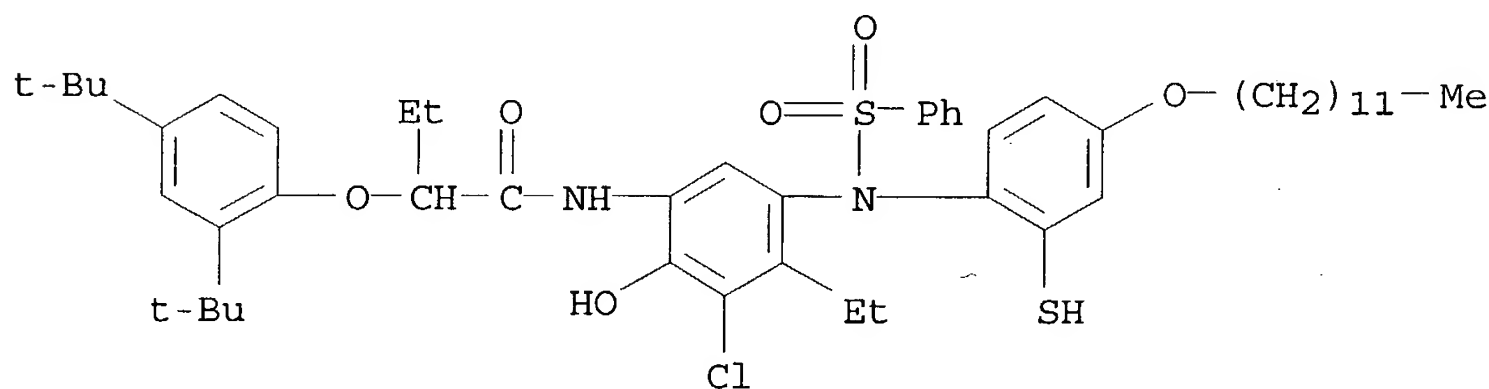
metal ions]. The material has an improved lightfastness without sacrifices in white background.

IT 112367-83-6

(metal-complexing stabilizer precursor, for color photog
. material)

RN 112367-83-6 HCA

CN Butanamide, 2-[2,4-bis(1,1-dimethylethyl)phenoxy]-N-[3-chloro-5-[[4-(dodecyloxy)-2-mercaptophenyl](phenylsulfonyl)amino]-4-ethyl-2-hydroxyphenyl]- (9CI) (CA INDEX NAME)



IC ICM G03C007-32

ICS G03C007-26

CC 74-2 (Radiation Chemistry, Photochemistry, and
Photographic and Other Reprographic Processes)

ST chelating stabilizer color photog material

IT Photographic stabilizers

(metal-complexing precursor for)

IT Photographic emulsions

(color, metal-complexing precursor for)

IT 111340-64-8 111340-68-2 112367-81-4 112367-82-5

112367-83-6 112367-84-7 112367-85-8 112367-86-9

112367-87-0 112367-88-1 112367-91-6 112367-93-8 112367-94-9

112367-95-0 112388-83-7 112901-34-5

(metal-complexing stabilizer precursor, for color photog
. material)

L45 ANSWER 22 OF 26 HCA COPYRIGHT 2003 ACS

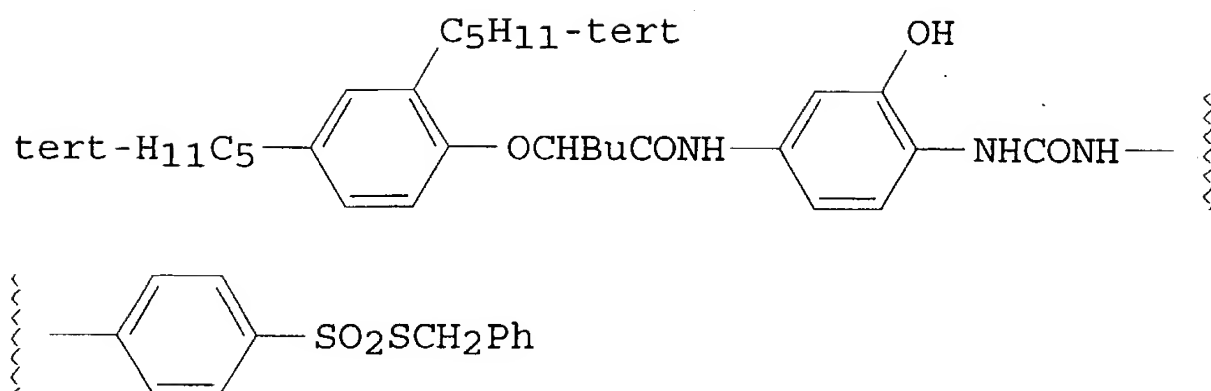
104:12992 Silver halide photographic

photosensitive material. (Konishiroku Photo Industry Co., Ltd.,
Japan). Jpn. Kokai Tokkyo Koho JP 60111244 A2 19850617

Showa, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP

1983-220209 19831121.

GI



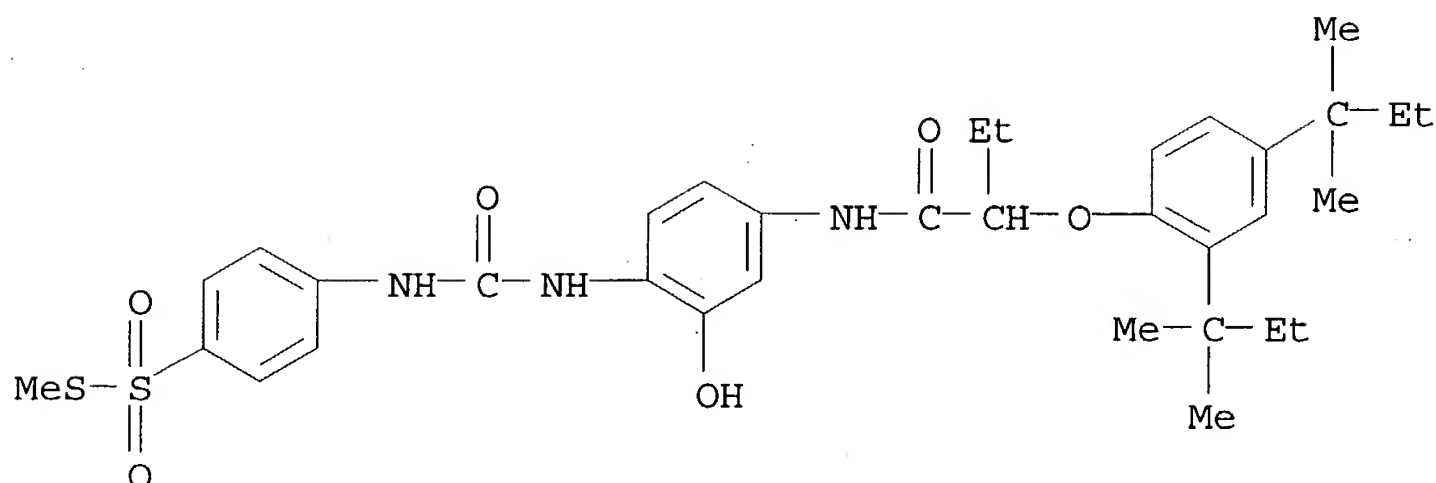
AB A **Ag halide photog.** material comprises a support and .gtoreq.1 **Ag halide** emulsion layer contg. a phenol-type cyan coupler in which the phenol ring bears a phenyl-ureido group with a SO₂SR (R = aliph., arom., heterocyclic group) group at the 2-position, H, or a group releasable on coupling reaction with an oxidized color **developer** at the 4-position and an acylamino group at the 5-position. The material contains a new-type cyan dye-forming coupler which has no unfavorable optical absorption in the green region and little dependence of reactivity on the **developer** compn., such as benzyl alc. content. Thus, a coupler-gelatin dispersion contg. the cyan coupler I and Alkanol B was mixed with a Ag(Br,I) (5% **AgI**) emulsion and then coated on a cellulose acetate support to form a color **photog.** film. The film was wedge-exposed, color-**developed**, bleached, fixed, and stabilized to give a cyan **image** with sensitivity and max. d. both higher than those of a control using a known coupler. Also, good color reprodn. was obsd. due to the presence of a sharp absorption band in the cyan coupler.

IT 99504-51-5 99504-52-6 99504-54-8
99504-55-9 99517-92-7

(**photog.** cyan coupler)

RN 99504-51-5 HCA

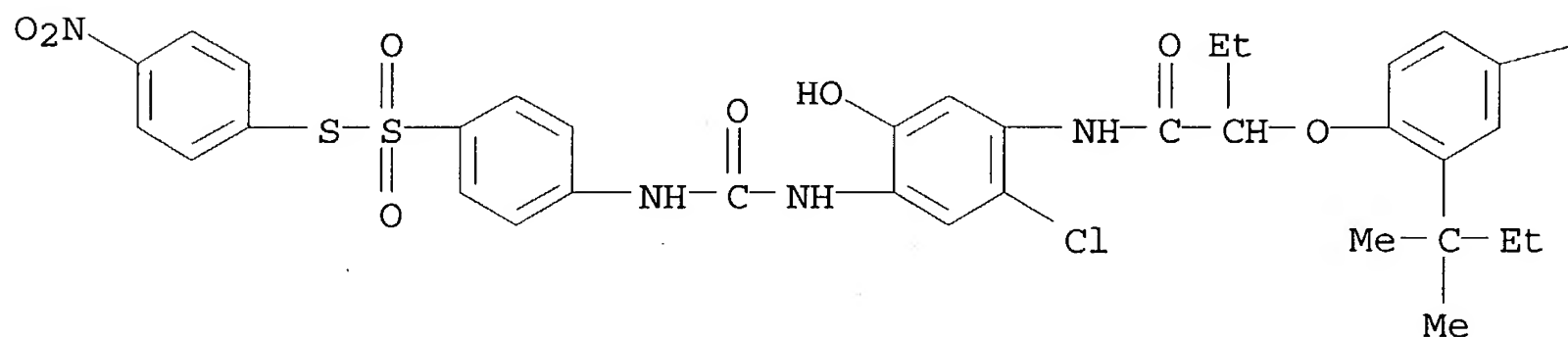
CN Benzenesulfonothioic acid, 4-[[[[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxobutyl]amino]-2-hydroxyphenyl]amino]carbonyl]amino]-, S-methyl ester (9CI) (CA INDEX NAME)



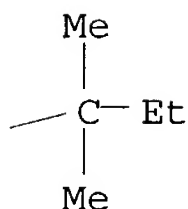
RN 99504-52-6 HCA

CN Benzenesulfonothioic acid, 4-[[[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxobutyl]amino]-5-chloro-2-hydroxyphenyl]amino]carbonyl]amino]-, S-(4-nitrophenyl) ester (9CI)
(CA INDEX NAME)

PAGE 1-A

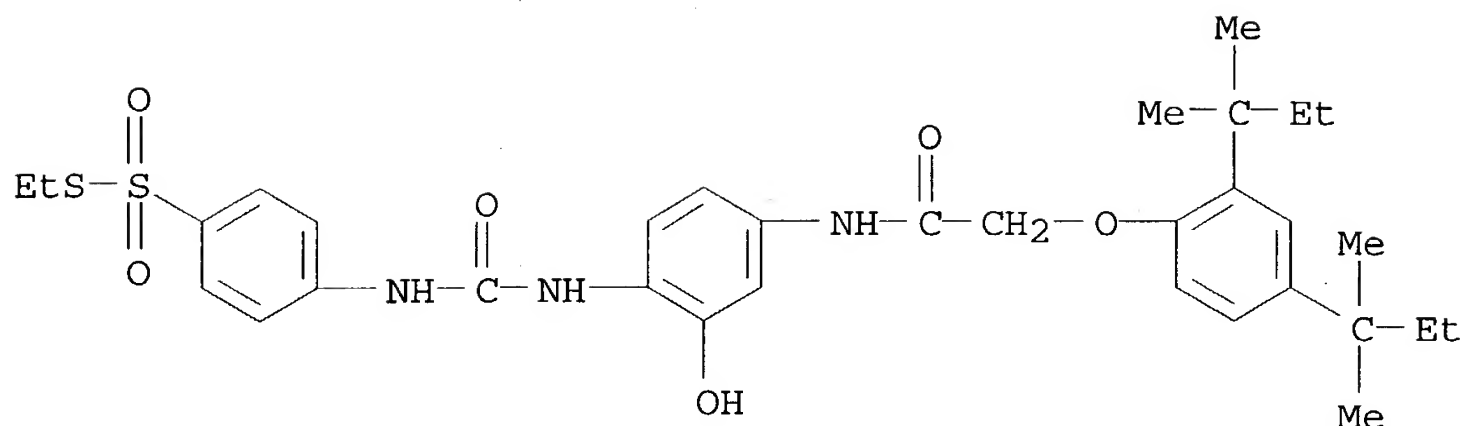


PAGE 1-B

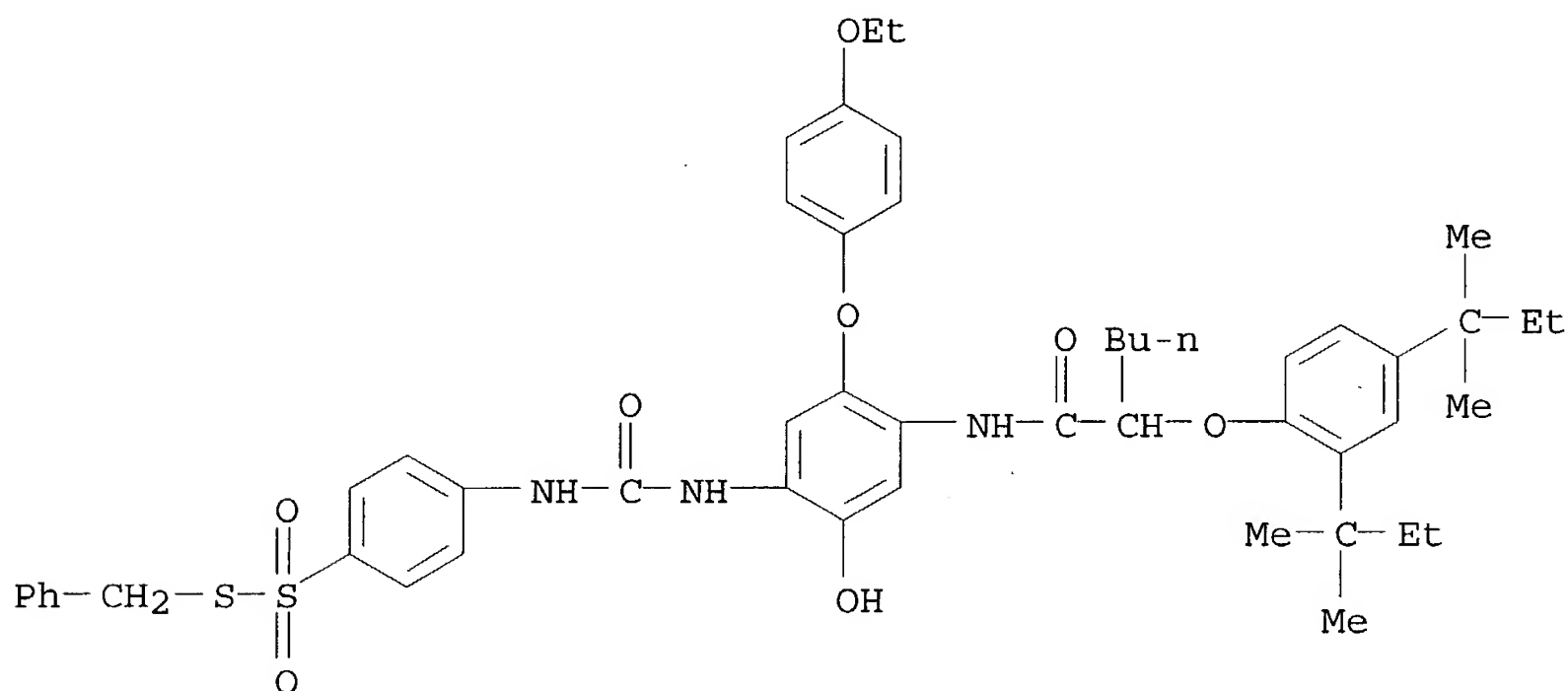


RN 99504-54-8 HCA

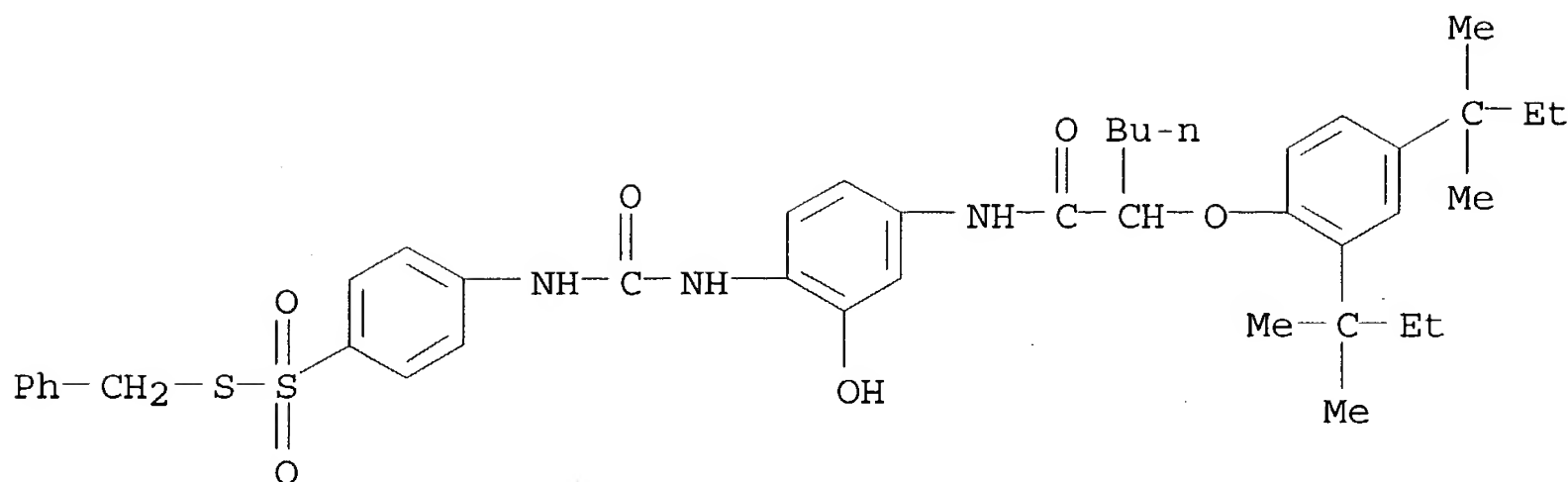
CN Benzenesulfonothioic acid, 4-[[[4-[[[2,4-bis(1,1-dimethylpropyl)phenoxy]acetyl]amino]-2-hydroxyphenyl]amino]carbonyl]amino]-, S-ethyl ester (9CI) (CA INDEX NAME)



RN 99504-55-9 HCA
 CN Benzenesulfonyl 4-[[[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-5-(4-ethoxyphenoxy)-2-hydroxyphenyl]amino]carbonyl]amino]-, S-(phenylmethyl) ester (9CI)
 (CA INDEX NAME)



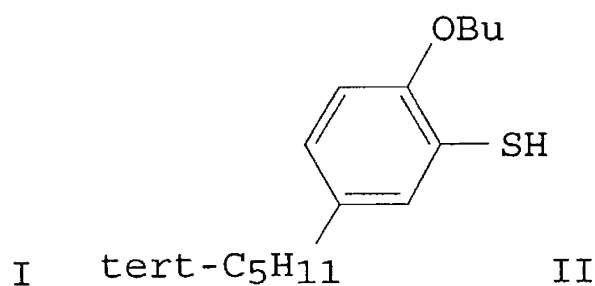
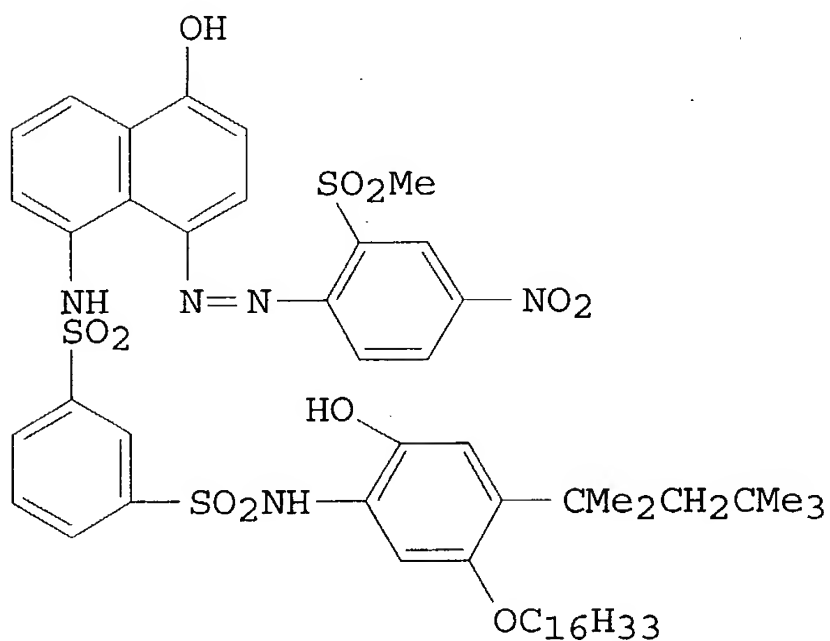
RN 99517-92-7 HCA
 CN Benzenesulfonyl 4-[[[4-[[2-[2,4-bis(1,1-dimethylpropyl)phenoxy]-1-oxohexyl]amino]-2-hydroxyphenyl]amino]carbonyl]amino]-, S-(phenylmethyl) ester (9CI)
 (CA INDEX NAME)



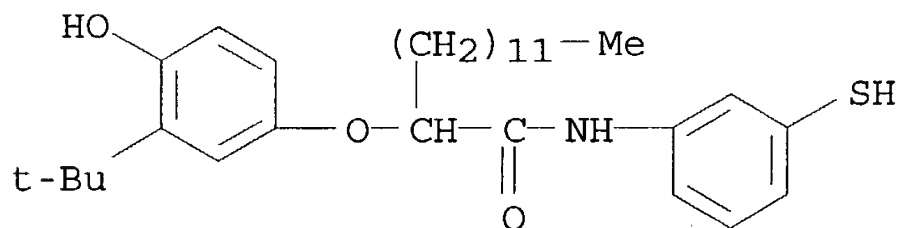
IC ICM G03C007-34
 CC 74-2 (Radiation Chemistry, Photochemistry, and
 Photographic and Other Reprographic Processes)
 Section cross-reference(s): 41
 ST cyan coupler phenol deriv **photog**
 IT **Photographic** couplers
 (cyan, phenylureido-substituted phenol derivs. as)
 IT 99504-51-5 99504-52-6 99504-53-7
 99504-54-8 99504-55-9 99517-92-7
 (photog. cyan coupler)

L45 ANSWER 23 OF 26 HCA COPYRIGHT 2003 ACS
 102:15191 Heat-developable color **photographic**
 material. Sawada, Satoru; Yabuki, Yoshiharu (Fuji Photo Film Co.,
 Ltd., Japan). Ger. Offen. DE 3345023 A1 19840620, 155
 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1983-3345023
 19831213. PRIORITY: JP 1982-222247 19821217.

GI



- AB A thermally **developable** color **photog.** material giving sharp and stable color **images** with high color d. and low fog is comprised of .gtoreq.1 **Ag halide**, a hydrophilic binder, a hydrophilic dye-releasing redox compd., and a compd. of the formula RSM (R = alkyl, cycloalkyl, aralkyl, alkenyl, or aryl; and M = H, Ag, alkali metal, or ammonium). Thus, a poly(ethylene terephthalate) support was coated with a compn. contg. a gelatin-Ag(Br,I) emulsion 25, a dispersion contg. I 33 g, a soln. of guanidine trichloroacetate 1.5 g in EtOH 15 mL, a 5% aq. soln. of polyethylene glycol nonylphenyl ether 10 mL, and a soln. of II 0.05 g in MeOH 5 mL at 60 .mu.m wet, dried, exposed for 10 s with 2000 lx using a W lamp, then heated for 40 s at 130.degree., contacted with a receptor sheet, and passed through a heated roller set at 80.degree. to show a Dmax of 2.10 and a Dmin of 0.14 vs. 2.21 and 0.34, resp., for a II-free control.
- IT **93608-60-7**
(heat-**developable** color **photog.** material contg. dye-releasing redox compd. and)
- RN 93608-60-7 HCA
- CN Tetradecanamide, 2-[3-(1,1-dimethylethyl)-4-hydroxyphenoxy]-N-(3-mercaptophenyl)- (9CI) (CA INDEX NAME)

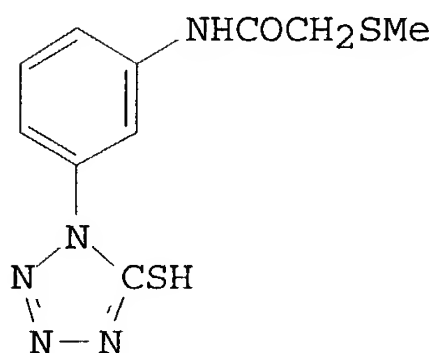


- IC G03C005-54
- CC **74-7** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST heat **developable** color **photog** material; thiol deriv heat **developable photog**; photothermog color thiol deriv; dye releasing redox compd **photog**
- IT Thiols, uses and miscellaneous
(heat-**developable** color **photog.** materials contg. dye-releasing redox compd. and)
- IT Photothermography
(color, heat-**developable** compns. contg. dye-releasing redox compd. and thiol deriv. for)
- IT **Photographic** films
(color, heat-**developable**, contg. dye-releasing redox compd. and thiol. deriv.)
- IT 93608-59-4 **93608-60-7** 93608-61-8 93608-62-9
93608-63-0 93608-64-1 93608-65-2
(heat-**developable** color **photog.** material contg. dye-releasing redox compd. and)
- IT 22257-44-9 26027-38-3

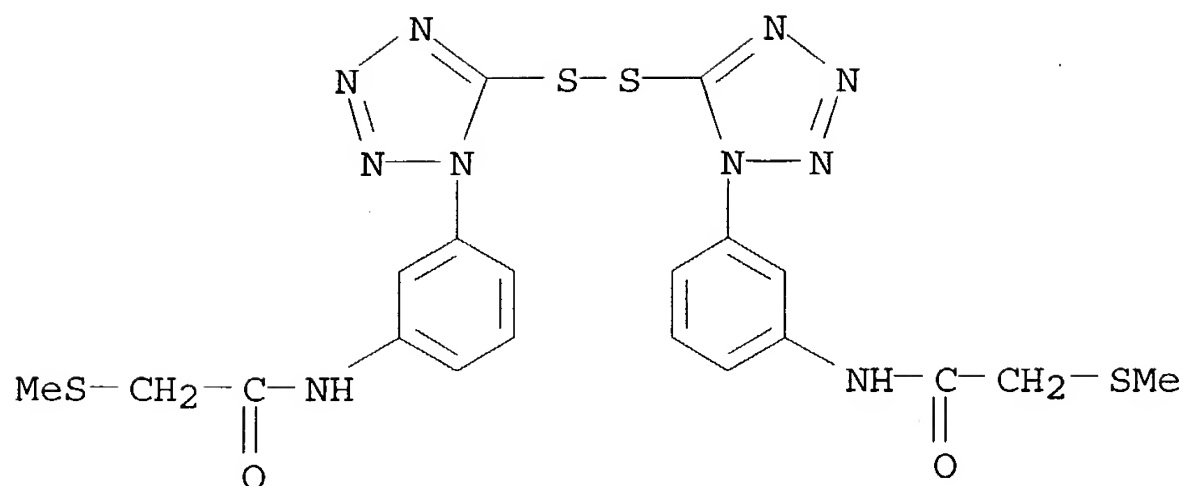
- (heat-developable color **photog.** materials
contg. dye-releasing redox compd. and thiol deriv. and)
IT 93369-39-2 93693-74-4
(**photog.** dye-releasing redox compd., heat-
developable color materials contg. thiol deriv. and)
IT 53845-09-3P
(prepn. and **photog.** applications of)

L45 ANSWER 24 OF 26 HCA COPYRIGHT 2003 ACS
97:101669 Antifogging compounds and their use in **silver
halide photography**. Pollet, Robert Joseph;
Vandenberghe, Antoon Leon; Spriet, Roger Alois (Agfa-Gevaert N. V. ,
Belg.). Eur. Pat. Appl. EP 53851 A1 **19820616**, 19 pp.
DESIGNATED STATES: R: BE, DE, FR, GB. (English). CODEN: EPXXDW.
APPLICATION: EP 1981-201277 19811119. PRIORITY: GB 1980-39457
19801209.

GI



- AB Antifogging agents which have good antifogging properties and
increase the speed of **photog.** emulsions are
1-phenyl-5-mercaptotetrazole derivs. whose Ph group contains a
thioether substituent. Thus, a **photog.** support coated
with a Ag(Br,I) gelatin emulsion (6 mol% of I-) contg I 0.35 mmol/
Ag halide mol was imagewise exposed and
developed to show fog, .gamma. and speed (measured at d. 0.1
above fog) of 0.1, 1.5 and 93, resp., vs. 0.14, 1.47 and 87, resp.,
for a control contg 1-phenyl-5-mercaptotetrazole instead of I.
IT **82829-73-0P**
(**photog.** antifogging agent, prepn. of)
RN 82829-73-0 HCA
CN Acetamide, N,N'-[dithiobis(1H-tetrazole-5,1-diyl-3,1-
phenylene)]bis[2-(methylthio)- (9CI) (CA INDEX NAME)]



IC G03C001-34; C07D257-04; C07D277-72; C07D263-58; C07D235-28
 CC 74-2 (Radiation Chemistry, Photochemistry, and
 Photographic and Other Reprographic Processes)
 ST antifogging agent phenylmercaptotetrazole deriv **photog**;
 fog inhibitor phenylmercaptotetrazole thioether deriv
 IT **Photographic** fog inhibitors
 (phenylmercaptotetrazole derivs. contg. thioether substituent in
 Ph group as)
 IT 82829-68-3P 82829-69-4P 82829-70-7P 82829-71-8P 82829-72-9P
 82829-73-0P 82829-74-1P 82840-67-3P
 (photog. antifogging agent, prepn. of)

L45 ANSWER 25 OF 26 HCA COPYRIGHT 2003 ACS
 94:112463 **Photographic silver halide** color
 material containing two-equivalent magenta couplers. Ichijima,
 Seiji; Seto, Nobuo; Watanabe, Toshiyuki; Furutachi, Nobuo (Fuji
 Photo Film Co., Ltd., Japan). Ger. Offen. DE 2944601
 19800514, 52 pp. (German). CODEN: GWXXBX. APPLICATION: DE
 1979-2944601 19791105.

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Color **photog.** materials giving better magenta dye
 formation yields with decreased amts. of magenta coupler and
Ag halide contain 2-equiv. magenta couplers having
 the formula I (R = anilino, acylamino, or ureido; R₁ = alkyl,
 aralkyl, or alkenyl; R₂, R₃, R₄ = H, alkyl, halo, alkoxy, aryloxy,
 acylamino, carbamoyl, sulfamoyl, sulfonyl, CN, alkoxycarbonyl). The
 materials contg. these couplers are not affected by the pH of the
developer and the resulting dye **images** are
 lightfast and heatfast. Thus, II 10.7 g was dissolved in a mixt. of
 EtOAc 20 and tricresyl phosphate 10 mL. This soln. was then
 dispersed in 10% aq. gelatin 80 g, the dispersion then mixed with a

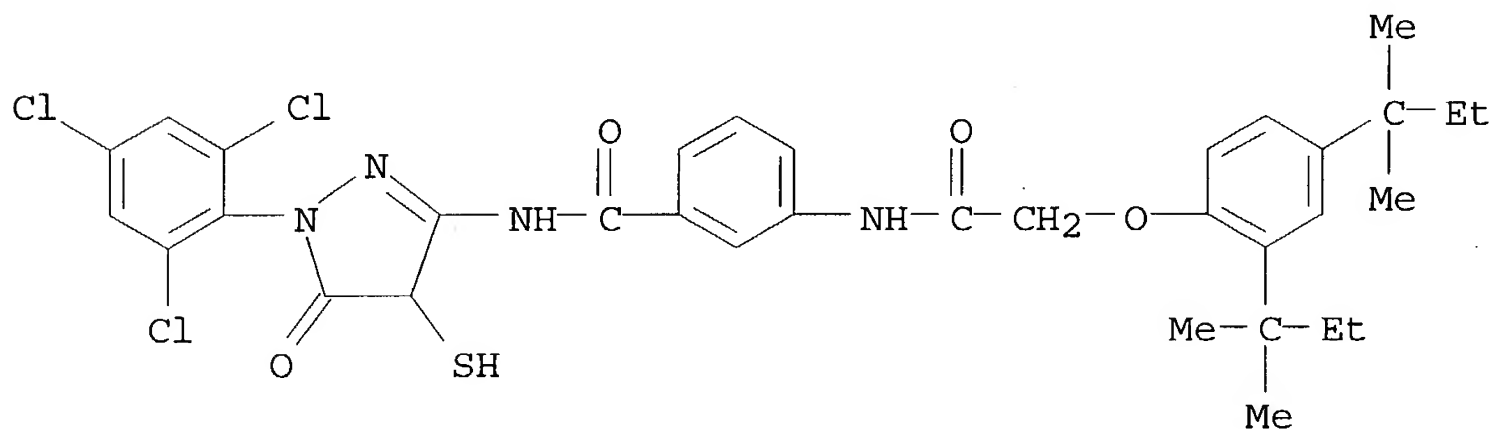
green-sensitive gelatin-Ag(Cl,Br) emulsion (7 g Ag) contg. Na dodecylbenzenesulfonate, coated on a polyethylene laminated paper, dried, a gelatin protective layer added, and the material then sensitometrically exposed at 1 s to 100 lx. Upon **development** a Dmax of 1.95, a Dmin of 0.09, and a color yield of 85% were obtained vs. 1.50, 0.08, and 45%, resp., for a control contg. III 10 g.

IT 74726-35-5P

(prepn. and reaction of, with halides)

RN 74726-35-5 HCA

CN Benzamide, 3-[[[2,4-bis(1,1-dimethylpropyl)phenoxy]acetyl]amino]-N-[4,5-dihydro-4-mercapto-5-oxo-1-(2,4,6-trichlorophenyl)-1H-pyrazol-3-yl]- (9CI) (CA INDEX NAME)



IC G03C007-38

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)

ST phenylpyrazolone deriv magenta **photog** coupler

IT **Photographic** couplers

(two-equiv., magenta, phenylpyrazolonethiols as)

IT 74677-28-4 74677-30-8 76267-65-7

(magenta two-equiv. **photog.** coupler)

IT 74726-35-5P

(prepn. and reaction of, with halides)

L45 ANSWER 26 OF 26 HCA COPYRIGHT 2003 ACS

62:6891 Original Reference No. 62:1248d-f **Photographic** products. Celeste, Jack R.; Cohen, Abraham B. (E. I. du Pont de Nemours & Co.). US 3155515 19641103, 5 pp. (Unavailable). APPLICATION: US 19621108.

AB **Ag halide** compns. comprise **Ag**

halide crystals which have been treated with greater than fog-inhibiting amts. of an acylamino thiophenol having at least 1 form represented by the formula RCONHC6H4SH-p, where R is a hydrocarbon radical and whose Ag salt is less sol. in H2O than **AgCl**. When a **Ag halide** dispersion is protected by such a compd., treatment with a 10% by wt. aq. Na2S2O3 (I) soln. leaves at least 3 times the amt. **Ag halide** undissolved as in a similar dispersion successively

treated with 5% aq. NaOCl and 10% aq. I, after vigorous agitation of the dispersions for 30 sec. at 25.degree.. Thus, a **photographic** emulsion was redispersed in a 5% gelatin soln. contg. 47 g. gelatin per mole of the **Ag halide**.

A pH of 6.0 \pm 0.1 was maintained while dispersing 10 min. at 110.degree.F. The emulsion was brought to 2320 g. by the addn. of H₂O and the temp. adjusted to 120.degree.F.; 0.4 g. of 4-(isobutyrylamino)thiophenol was added per mole of **Ag halide** from a 1% by wt. EtOH soln. Cr alum hardener was added and the emulsion was dild. with H₂O to a total wt. of 2334 g. per mole of **Ag halide**. A **photographic**

film base coated with this emulsion, when heated with a solvent to remove exposed **Ag halide** and then treated with a fogging **developer** (cf. U.S. 3,155,507), gave a **Ag image** with optical ds. of completely unexposed areas and heavily exposed areas of the film of 1.11 and 0.05, resp.

IT 2182-90-3, Benzanilide, 4'-mercapto-4-(pentyloxy)-

2457-82-1, Terephthalanilide, 4',4''-dimercapto-

2488-85-9, Phthalanilide, 4',4''-dimercapto-

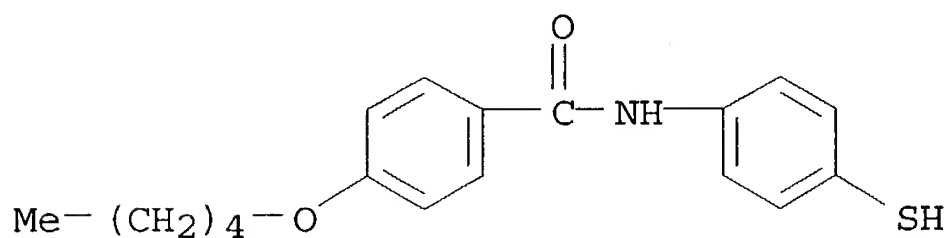
2642-22-0, Benzanilide, 4'-mercapto-4-nitro-

2642-23-1, p-Anisanilide, 4'-mercapto-

(prepn. of)

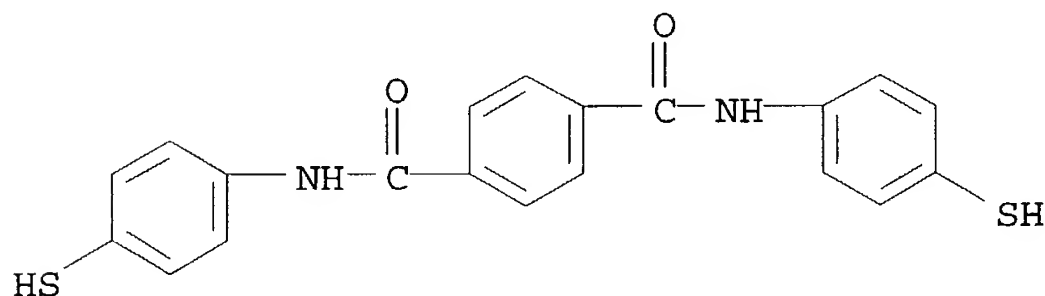
RN 2182-90-3 HCA

CN Benzanilide, 4'-mercapto-4-(pentyloxy)- (7CI, 8CI) (CA INDEX NAME)



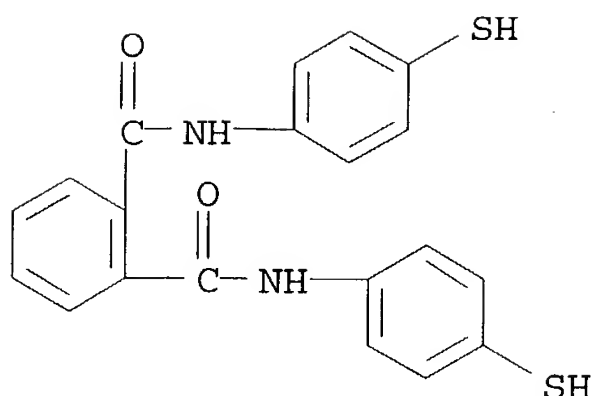
RN 2457-82-1 HCA

CN Terephthalanilide, 4',4''-dimercapto- (7CI, 8CI) (CA INDEX NAME)

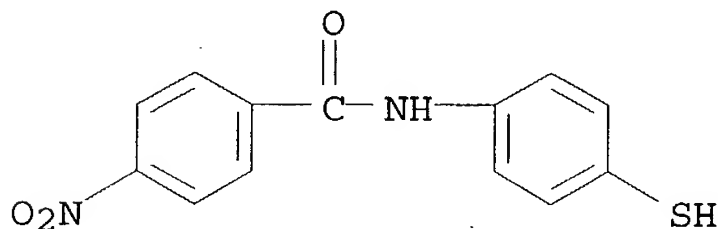


RN 2488-85-9 HCA

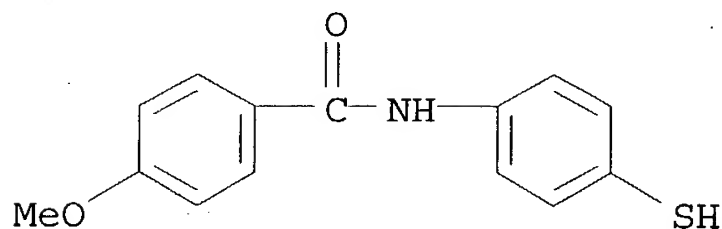
CN Phthalanilide, 4',4''-dimercapto- (7CI, 8CI) (CA INDEX NAME)



RN 2642-22-0 HCA
 CN Benzanilide, 4'-mercapto-4-nitro- (7CI, 8CI) (CA INDEX NAME)



RN 2642-23-1 HCA
 CN p-Anisanilide, 4'-mercapto- (7CI, 8CI) (CA INDEX NAME)



NCL 096107000
 CC 11 (Radiation Chemistry and Photochemistry)
 IT Amides

(N-(p-mercaptophenyl), **photographic** direct-positive emulsion treatment with)

IT 2182-83-4, Hexananilide, 4'-mercapto- 2182-86-7, Butyranilide, 4'-mercapto-3-methyl- 2182-87-8, Octananilide, 4'-mercapto-2182-88-9, Dodecananilide, 4'-mercapto- 2182-89-0, 1-Naphthanilide, 4'-mercapto- **2182-90-3**, Benzanilide, 4'-mercapto-4-(pentyloxy)- 2182-91-4, Cyclohexanecarboxanilide, 4'-mercapto- 2182-92-5, Propionanilide, 4'-mercapto-2,2-dimethyl-**2457-82-1**, Terephthalanilide, 4',4''-dimercapto-**2488-85-9**, Phthalanilide, 4',4''-dimercapto-**2642-22-0**, Benzanilide, 4'-mercapto-4-nitro-**2642-23-1**, p-Anisanilide, 4'-mercapto-(prep. of)